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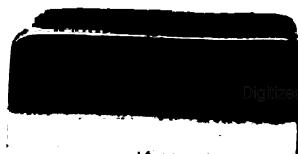
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THE FORTNIGHTLY CLUB

**THE
FORTNIGHTLY
CLUB**

BY HORACE HUTCHINSON

**NEW YORK
E. P. DUTTON AND COMPANY
1922**

TO
D. M. H.

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P R E F A C E

WHEN I began taking notes of the proceedings of our Fortnightly Club I had no idea of the length—and depth—to which they would lead me. I was in the early stages of learning shorthand, and welcomed the chance of practice. A great deal of what I took down was of very slight interest, and quite disjointed ; but the series of addresses in which Professor Launceston opened several of our debates had a consecutive interest which made them constructive parts of a single whole, working to a conclusion of which I had no glimpse when I began recording them. I do not know how far Launceston foresaw at first. I am sure that he did not start with an idea of giving us, in successive addresses, a thought-out plan of the way and purpose of the evolution of terrestrial life : he would have thrown keen scorn on the idea had it been suggested. But I know that his subject gripped him, as he came to grips with it. He liked putting his thought into words and hearing its sound and seeing how it might be received, and it gave him rest from the experiments with poison gases which was his special war work—for the war was in the third year of its evil life at the time.

I do not suppose that Launceston's thought actually grew as he went along. I imagine it was

all there with him from the start. But he certainly revealed a new Launceston to us, a Launceston of whom we had no idea until then. Perhaps it might be so with most men of our casual acquaintance if they gave us the thoughts of their hearts. But Launceston, the old Launceston at least, was as much of an enigma to his fellows as a man can be, and so gave the more to be discovered.

With such slight introduction of our principal debater I may leave him and the rest to explain themselves.

I have to thank the Editors of the *Westminster Gazette* and of the *Quarterly Review* for leave to use pages from articles which I contributed to them.

CONTENTS

CHAPTER	PAGE
I. INTRODUCING ONE OR TWO MEMBERS	1
II. HOMO SAPIENS, AND OTHERS . . .	12
III. LAUNCESTON'S CREED	28
IV. THE GREAT COOK AND THE LITTLE Cook	37
V. ANIMAL PSYCHOLOGY	50
VI. ANIMATE MATTER AND HUMAN Reason	61
VII. THE CRITICS	74
VIII. MAN—THE MISTAKE-MAKER . . .	84
IX. "THERE MUST BE PAIN"	107
X. "WHAT IS SIN?"	132
XI. ALTRUISM AND EGOISM	162
XII. HUMAN SPIRITUALITY	171
XIII. MAN'S AGE ON THE EARTH . . .	205

CHAPTER	PAGE
XIV. THE UNIVERSAL CINEMATOGRAF .	216
XV. THE EARTH'S PLACE IN SPACE .	231
XVI. THE REAL ARMAGEDDON . .	248
XVII. A BOMB-SHELL . . .	278
XVIII. THE SUMMING-UP . . .	287

THE FORTNIGHTLY CLUB

CHAPTER I

INTRODUCING ONE OR TWO MEMBERS

"CAN you tell me a reason," asked Professor Launceston, "why a man shouldn't commit suicide, if he wants to?"

The occasion was a sad one. Edward Thursby, one of the first members of our little Fortnightly Club, had taken his life under very distressing circumstances. We had generally united in the natural expressions of horror and commiseration. Only Launceston had assumed a different view, defending poor Edward Thursby's action, even refusing to allow us to put the conventional "poor" before his name. "Not poor at all, nor to be pitied at all now," he said. "To be pitied in his lifetime—yes. But not to be pitied now. He has freed himself from all that for which he was to be pitied. I think his act a perfectly rational one."

It was Launceston's way to differ. He was seldom happy except in opposition, especially in opposition to recognised and established opinion. So much did he love opposition that we often did not know—we doubted whether he himself knew

2 INTRODUCING ONE OR TWO MEMBERS

now and again—whether it were for the sake of perversity, just in order to oppose, or for the sake of truth, as he conceived it, that he argued. But argue he would—on every topic possible, taking sometimes the most surprising and even the most impossible points of view, but arguing with a whimsical ingenuity, so that many a man came away from one of our meetings saying that Professor Launceston had talked him into a firm belief in what he knew perfectly well to be untrue. And he was humorous withal, uttering whimsies with a deepening of the melancholy which sat habitually graven on his lantern-jawed face, beside which Don Quixote's would have glowed with the geniality of a Mark Tapley—surely the most rueful-looking Yorick that ever set the table in a roar! You will not suppose, perhaps, with all this, that Launceston was a very popular Club member. He was not; but most of us admired him, most of us feared him, none of us pretended to understand him, few of us, after a first or second trial, cared for a bout of verbal fence with him, for he fought with the buttons off the foils, and, whatsoever of the Christian virtues he may have practised, assuredly that of suffering fools gladly was not on his list.

Defences against such rapier thrusts of wit, and even such bludgeoning strokes of heavy and scarcely human rudeness as Launceston would deal, are various, and the most effective in its way was perhaps that of old Sir James Macadam, the geologist, whom we all loved, but who really was typical of that not large class of Scotsmen whom Charles Lamb must unfortunately have studied

before he uttered his notorious libel on the Scottish sense of humour. Sir James had an absolute impenetrability to all fine points, which always particularly exasperated Launceston—the more so that the other, and older man, seldom so much as noticed his exasperation—and sometimes drove him to say downright rude things to the senior of which, to do him justice, I fancy that Launceston himself was much ashamed in less hasty moments ; though he would have perished rather than confess his shame.

Another who bore Launceston well, in his fashion, was Foljambe, his Eton friend, whom Launceston himself had introduced into our Club, and if it was as foil to himself that he welcomed him the choice could not have been better, for Foljambe, excellent fellow, though inveterate grumbler, was as good a sportsman and gentleman and as dull a dog withal as a public school education can produce, while Launceston, gentleman perhaps, but sportsman not at all, and not by his worst foe (and he made many) to be charged with dulness, would scarcely be recognised by his *Alma Mater* as her child. But Foljambe, by old association, was of the few who did not fear Launceston, and Launceston, perhaps for the like reason, and also because Foljambe's comment was so blunt-edged and blundering that it could draw no blood, would take from him without offence words that no other member would dare say to him.

So now it was Foljambe who took up the argument in his usual tone of testy irritation : "Of course I don't know whether you believe in God—

4 INTRODUCING ONE OR TWO MEMBERS

don't suppose you do—don't suppose there is anything you do believe in—but if you do believe in any Creator you must believe that life's a gift that He's given you and that you're going right against His purpose if you go and destroy it."

Launceston's face, which did not smile easily, relaxed a little as he saw who the foe was that entered the arena.

"Do you say that," he asked, "of the life of man only, or also of the life of the other animals—that it is the Creator's gift?"

"I say it of all life, of course."

"And yet you countenance opposition to the Creator's purpose in giving life to a sheep by eating a mutton-chop! I saw you do it not half an hour ago."

"A man's life is different from a sheep's," was Foljambe's ineffective answer.

Launceston took the dull thing into the armoury of his mind and immediately turned it out again with an edge to it. "It is so different," he said, "that to a sheep life is almost everything, to a man it is almost nothing."

"What do you mean by that?"

"I mean, that death is the end of the sheep, but not the end of the man, and for that reason you thwart the 'Creator's purpose,' as you please to call it, far more drastically when you kill a sheep than when you kill a man."

Foljambe growled and grunted, but no coherent words came in reply for a full half-minute, when he burst out: "No doubt you make it look like that when you put it in that way. I don't pre-

tend to know anything about it, but I'm sure you're wrong."

"Quite right, quite right. Never allow a rational argument to upset your belief. We are all much too apt to that. But now, tell me this : The Creator gave you teeth. Occasionally, unless you're luckier than most men, He has given you an aching tooth. Do you think you thwarted the 'Creator's purpose' in having out the tooth? God gave Edward Thursby a life. He gave him an aching life. Do you think Edward Thursby thwarted His purpose in having out the life? Are not the cases parallel?"

I began to take an interest in this talk, for I was the secretary—very purely honorary—of our Club, and it was no small part of my duties to provide a reader of a paper on alternate Thursday evenings. The origin of the Club was like that of the child Topsy : it grew. Its growth was from the root of a once-a-fortnight meeting of one or two of us, chiefly old University friends—who had formed the pleasant habit of dining together and discussing all things in heaven and earth, and many more. As one or another brought a guest, we found our numbers growing, and more seeking to be added to them, until it became convenient to form ourselves into a Club, and take a house of our own in old-fashioned Bloomsbury. It was a dingy, rambling building, exceedingly ill-planned for the convenience of a family, and it was probably due to this inconvenience that we were able to get it at a very moderate rent. It was roomy enough, with a street at back and in front, between which

6 INTRODUCING ONE OR TWO MEMBERS

it occupied the whole ground. Economy of space had evidently not been considered by its architect. Up one little staircase, springing from the hall, were two rooms by themselves, connected in no other way with the rest of the house—a curious arrangement which we were able to turn to good account by letting them on a yearly lease to one of the members, Sir James Macadam, the geologist. It was worth his while to take the rooms at a good rent for the advantage of living in the Club and having the service, such as it was, at his command.

With the acquirement of this settled domicile it is evident that the chosen name ceased to fit us. From 'fortnightly' we had transmuted ourselves into 'daily.' Still we did not change our title, which did its duty well enough, though its original meaning was obsolete. On most evenings we met, as it might be in any smoking-room of any club, and talk went on around all subjects that came uppermost, between such few of us as were there. But every other Thursday we tried to make rather a special meeting day, and it was my secretarial task to provide a lecturer or, at the least, the starter of some hare of debate. Someone—but he was a guest—said of us, with little truth and less originality, that we cultivated "low living and high thinking." It was a two-edged compliment which no admitted member would have thought of applying to ourselves in either sense, but I am afraid that the young fellow who paid it had been given some of the Club's cheap wine which, at its worst, is bad.

I took the hint of the talk I have just been

relating to ask Launceston if he would throw his ideas on the subject of suicide into form of a paper, and read it to us on one of our Thursdays.

He shook his head. “ Oh *connu*,” he said, “——*connu*.”

His French accent leaves much to be desired, but I understood him to mean that the theme was not sufficiently fresh.

“ Hume has done it,” he went on, “ De Quincey has done it, Madame de Staël has done it, Dr. Donne has done it. I do not know how many more. Who am I that I should come in with my little candle after those lights ? I know my place.”

This last was untrue, but I knew him too well to try to change his mind. Still, he spoke in a fashion that did not seem quite final and gave me hope, and the result of leaving him unvexed was that he resumed directly : “ I should not mind ; I should rather like to throw together an idea or two under some such heading as ‘ Life and Death.’ It seems to me that there is something still to be said about those little words. Most of what is said about them, as about most other things, is wrong, hopelessly wrong, quite obviously and absurdly wrong. In the first place, they are constantly put into an antithesis which in itself is ridiculous.”

“ Good,” said I. “ Good. ‘ Life and Death ’—quite sufficiently important subjects both of them—with a little suicide thrown in or not—just as you like. And the earlier the better.”

“ Oh, I’m not promising anything,” he said quickly : and I saw that I had gone too fast.

8 INTRODUCING ONE OR TWO MEMBERS

“ The infinitely obvious is so dull, and the obviously infinite is so difficult, and there’s so little in between the two.”

“ Well, think it over, will you ? ” I compromised.

“ I’ll think it over, yes. But I don’t think I’ll touch on the question of the ethics of suicide at all. That’s a very minor problem at the best, or worst. Perhaps, too, it’s a problem that defies argument. I said, and I still maintain, that you can find no rational argument against suicide : your reason can furnish you with no condemnation of it. Nevertheless, I must confess to you that in my own soul somewhere, deep down, so deep that it seems to me to come from sources far transcending any that we can call terrestrial, is a conviction that were I to choose friend Thursby’s exit from a life which I feel unbearable I should be doing an act which would condemn me in a Higher Court. Old Foljambe was perfectly right in what he wanted to say, only, of course, he couldn’t say it. I often feel like editing that poor Hamlet who lacked the courage of our friend Thursby :

“ For who would fardels bear,
To grunt and sweat under a weary life,
But that the *hope* of something after death
 . . . puzzles the will
And makes us rather bear those ills we have
Than *risk the blessings* that we know not-of.”

Thus, I have a conviction that I should, so, be risking them. I can give no more account than Foljambe can of how that conviction comes ; can only say that I find it there, an active and masterful motive, one in which my intellect has no share. .

I can say no more of it than that there it is, a potent reality, one among the many mysteries which are far more real than the things that seem intelligible."

I gazed at him. This was my first glimpse of the new Launceston of whom I spoke in the Preface. After years of acquaintance, it was the first lift of a corner of the shroud of cynicism in which he chose to drape himself.

"The worst of it all is," he resumed after a moment's thought, "it opens up such very big questions: it takes you so very far back. One hardly knows where to begin on it all."

"Why not at the beginning?" I hazarded.

"I suppose you mean," he replied sourly, "at the furthest point to which we're able to guess our way back."

"Something like that."

"Of course *I* think," he went musing on, "that one might perfectly well begin with life; begin there, as with a new chapter, wherein something quite new, something that had not been there before, nor was implied or even hinted by anything that had been before, was added."

"You'd come right up against Sir James Macadam there. He says, of course, that there was no new departure when life came in, that it is a perfectly natural development of inorganic matter, and that it is only because we have not yet quite got at the connecting link that we doubt the link's being there. He says that life is purely a question of the right synthesis of proteid. Get that and you'll get protoplasm."

10 INTRODUCING ONE OR TWO MEMBERS

"Just what an old fossil like Sir James Macadam would say," Launceston declared irritably. "I've got a little bit of a surprise in store for him to-night, by the bye," he added.

I was devoutly glad to hear it. The occasion of our meeting in the Club that Thursday was the reading of a paper by Sir James Macadam on 'Man as a Reasoning Animal'—a deadly hackneyed theme of which I, as unfortunately responsible for these fortnightly debates, felt much ashamed. Had it not been that in the stress caused by the war the difficulty of getting members to start good subjects was extreme, I should not have tolerated it; nor, though Macadam was deeply learned, could one expect that he would dredge up from those depths any glittering novelties to illuminate the ancient topic. He had narrowly missed greatness in the days of the great Darwinians, but his mind had not been readily plastic in the moulds of later science. It worked still in the forms fashioned fifty years before. I hailed, therefore, Launceston's announcement with a great gladness.

"What's the surprise?" I asked.

"You'll see," he replied mysteriously, and would say no more. I had to possess my soul in patience, but in far more satisfaction than I had dared to hope about the prospects of the night's debate. I even came to it with my note-book, prepared for the taking of shorthand notes, in the expectation, which I had not cherished before, of something worth recording. I was only just painfully acquiring the shorthand art. The writing of the short script was not the difficulty—that was as

easy going as the slope to hell—*sed revocare gradus, superasque evadere ad litteras*—to translate it back into long script again—that really was the deuce and all of a job. Still, I think that in the main I have caught the right gist of most of the debates that I have recorded, and for many I was able to refer to the mover's own manuscript at length or in précis.

CHAPTER II

HOMO SAPIENS, AND OTHERS

SIR JAMES developed his well-worn theme along lines so easily to be foreseen as to be almost inevitable. The audience were not greatly surprised when Launceston came into the room bringing with him a large, squarish, baize-covered case. He had rooms just across the street, and it was the frequent custom of the openers of our debates to bring in apparatus of a chemical, a magnetic, or whatever it might be kind to help in illustrating their theses. The case did not appear to be heavy, for he carried it in on his forefinger passed into a loop of cord which came up through a slit in the baize, and set it on the floor beside him. Of course it was all in the tradition that as soon as the opener had finished his discourse a general discussion should take place around it. No one doubted that it was in order to take a hand in the ensuing debate that Launceston had come, nor that the case which he bore with him contained some form of illustration of the views that he would advance. And, since his views were inclined to paradox and heterodoxy, and especially to opposition with those of Sir James Macadam, who was a faithful adherent of the strictest sect of the evolutionists, his entry was noted with satisfaction.

The learned old gentleman told us how the human brain had gradually grown from that of the ape, showing diagrams of the skulls of the Caucasian, the Negro, the Chimpanzee, and the Lemur, to demonstrate the constant increase in cranial capacity. He proceeded then to give us various causes for this increase, and for the gradual acquirement by *Homo Sapiens* of a developed intelligence superior to all the rest. He pointed out to us, *Alpha*—for some reason the English alphabet seemed never adequate for Macadam in noting the heads of his arguments—*Alpha*, the advantage that man gained from the acquirement of the upright position: (1) in ability to traverse the earth with his head held aloft, so that he could see well ahead of him; (2) in the freedom which it gave to his hands to bring anything which he wished to examine up to the level of his eye. This power in itself would go far—"verra far," as the lecturer said, with a rich accent that gave added conviction—towards exciting the inquiring intelligence of the brain. *Beta*, the advantage that he had over most mammals in his ability to turn the head freely, right and left, owing to the peculiar pose of the skull on the cervical vertebræ. *Gamma*, the aid to intelligent association between sense and brain afforded by the grasping with the hand, whereby comes the tactile sense to the assistance of the others. *Delta*, the advantage in the increasing freedom of the tongue, whereby to man alone came at length the faculty of verbal sounds—language, and all that language had meant in the development of thought. "In fact," said the lecturer, "the evidence of the

anatomical facts is so strong and cogent that it almost seems as if it would compel us to say, though we had no other evidence before us, 'Such an animal as this, so uniquely gifted, must surely derive some unique advantage, must become uniquely sapient, must reason.' " On which comfortable conclusion he resumed his seat.

Meanwhile, towards the close of the address, some rather curious sounds had been issuing, as it had seemed to us, from that baize-covered case which had been brought in by Launceston. There had been some kind of mysterious scrabblings, and once something very like a human voice and a sound not unlike the word 'Damn.' It had caused quite a start to those near it. It is true the word might possibly have emanated from Launceston himself, but it had hardly seemed so.

As soon as Sir James had finished, by common consent most of us looked towards Launceston. We expected something of him—we knew not what—and he did not disappoint us. He did not at once begin to speak, but leisurely lifted the case from the floor and set it up on the lecturer's table in front of Sir James; then he drew off the green baize draping and discovered beneath it a very fine grey parrot in a square wire cage.

The bird appeared slightly dazed a moment, at the light thus let in, then shook itself in a manner that fluffed out its feathers momentarily to twice their normal size, sleeked itself down again to a fine figure, and then began to call out with alarming speed and vehemence, "You're all fools! You're all fools!"

Launceston patiently set himself to the task of calming the bird. "Of course, Polly, of course, we know that—all of us who know anything. You needn't tell us that. Besides, you've said so more than once. We've all heard you."

Gradually the bird began to quiet down. Then he opened the cage and let it come out on his wrist. He fondled it, and it put down its head and let him scratch its poll. The understanding between them appeared perfect. Still we did not perceive the exact significance of the comedy, or its bearing on the subject of the debate. Then Launceston, still gently scratching the parrot's poll, began to speak. And he spoke with an imitation, a bad imitation, of Macadam's Scottish dialect, which was in the worst possible taste; and yet I am afraid that we guiltily appreciated every sentence of his argument.

"I wish to point out to you," he said, "how inevitable it was, on anatomical grounds, that reason, that glorious and unique gift, should come the way of the parrot, *Psittacus Sapiens*. *Alpha*, it has enjoyed all the advantages, and many more, that man ever acquired from the upright position, for (1) it has no need laboriously to walk, it can fly over the earth and see all before and below and around it as it goes; (2) it has all the freedom to pick up an object and carry it in its claw to its face, for examination. Have an almond, Polly?" He offered the bird, as he spoke, an almond, which he brought from his waistcoat pocket, and the parrot clutched it in its right claw, and held it up to its eye for close inspection. "This faculty goes

far—verra far—towards exciting the intelligence of the brain. *Beta*, it has the advantage over most mammals in ability to turn the head easily, from side to side, owing to the pose of the skull on the cervical vertebræ. *Gamma*, there is all the aid to intelligent association between sense and brain given by the grasp with the talon, whereby comes the tactile sense to the assistance of the others. *Delta*, it has more than enough freedom of the tongue for the making of verbal sounds—language, which has been so all-important in the development of thought. What do you think, Polly ? ”

The parrot, as Launceston returned it to its cage, recommenced its vociferation : “ You’re all fools ! You’re all fools ! ” until reduced to silence and darkness by reimposition of the baize cover. Its master lifted it from the table, placed it on the floor again, and sat down with a weary patience to wait for the next contribution to the discussion.

Launceston was never a very easy man to follow in debate, and the peculiar manner of his interpolation on this occasion made it especially difficult to take up the subject after him. There was an uncomfortable and, as it were, a stricken silence for several moments, broken only by the scrabblings of the darkling parrot. Then Macadam rose slowly to his feet.

We had expected, possibly we had hoped, that the old man would respond in anger. There was no note of anger, however, in his voice, as he began—only a strange indecision. “ I have to confess that I have been strook,” he said, “ verrá greatly strook, by the manner in which Professor Laun-

ceston has intervened in this debate. I wouldna say that it was a verra courteous manner——” “No, don’t,” came as an interposition from Launceston himself. “Na, I wouldna say that it was courteous ; but I would say that it raises a line o’ thoct which has na’ occurred to me before—would say, in conclusion, only that I need to give it thoct before I would pronoonce upon it.”

The discussion had been interesting and amusing in the whimsical way that Launceston had conducted it, but it appeared in danger of being left in the air, with rather a ragged edge to it, for no one seemed disposed to carry it further. There was a full minute’s silence, as I should guess, before Dr. Pershore, who could venture further than most members of the Club with Launceston—probably because he was the doctor who dosed him—said :

“That’s all good, Launceston. You’ve given me a new idea to think about, as Sir James Macadam says, and no man deserves better of mankind than one who does that ; but can’t you develop it for us a little bit ? ”

“I did bring some notes along for that very purpose ”—he dived into his pocket and produced some loose and fluttering sheets. “But I didn’t know, really, if anybody would care to hear them.”

As mere courtesy required, the members murmured a desire so to do.

“My great contention,” he said, “is that there came a real break, a new departure, when the human mind came to take its place and do its work in the world, and one of the very strongest arguments, as it strikes me, for this human mind being

a new thing on the earth, and not a thing which was only an outgrowth from something older, has generally escaped notice because it is purely negative. If, as has been asserted, anything like human reason exists or has existed in the lower animals, how is it that it has not shown itself in one single indubitable instance? If the germ is there, waiting for expansion, if it has been there through the millions of years—literally millions, probably many of them—that the ape has been the ape, how does it happen that not an indication of that expansion is to be traced on any record?

“Observe the advantageous circumstances in which that germ, if existent, has been placed during the last million or so of years during which man has been in process of conquering the world by means of his reason. All that while, the ape has been privileged to watch man making his fires, using his bows, his clubs, and so forth. The monkeys, we are told, will come and warm themselves gratefully at the embers of the fire which man has left glowing in the forest. Not to one single one of them has it occurred to place another branch, from those lying all around them, on the dying fire, though some of them must have seen this done by man a score of times. The stupidity of animals is really infinitely more remarkable than that so-called sagacity, of which we hear so much.

“Powerful testimony in support of this that I have called the negative argument for regarding the human intellect as a new introduction into the evolutionary scheme may be drawn from Mr.

Wood Jones's interesting work *Arboreal Man*. Tracing man's descent from his lowly ancestors, he brings out very strikingly the value of the arboreal habit, first in permitting and encouraging the development of the grasping hand in preference to such a relatively clumsy organ as the hoof of the horse—to take that organ as typical of the development of a creature going upon the ground on all fours. Secondly, the arboreal habit, with its implied grasping faculty, encouraged and developed in its turn the upright posture of the bipedal mammal, with the two hands and arms freed for a variety of useful purposes likely to stimulate the action of the brain and mind.

“ Very good, so far ; and the argument is both cogent and of interest as it follows the evolution of man. But then, we may observe that this gives us just as precise a narrative of the development of others of the primates as of the branch which has flowered out into man. Why is it then, we may well ask, that the gift of reason is man's only, and that not so much as a crumb from his table has fallen in the way of any of these others ? We ask, but there is no answer vouchsafed to us out of the evolutionary biological camp.

“ Even the most primitive and elementary use of tools seems to be wholly outside the mental powers of these creatures, in spite of their perfectly adequate endowment of manual power and flexibility. They do not even take a stick for offence or defence, though their life is lived where sticks abound. Stories of baboons throwing stones offensively have been narrated, have been accepted by

Darwin,¹ but discredited by later and careful observation. Surely it goes for very little that, after laborious training and teaching, a monkey should have learned how to use a stick as a rake, as recounted by Mr. Hobhouse.² The throwing of missiles by the trained chimpanzee at the Zoo belongs to the same category of things most easily to be accounted for by a mental faculty certainly lower than reason. The single good instance that I know of an animal in the wild state showing a sign of tool-using is that of the famous SpheX, as narrated by the Peckhams.³ It battered down the loose earth on the lid of its burrow with a small stone held in its mandibles. But even this is so slight an advance on thrusting the small stone in, together with the crumbs of earth—which is the common habit of their kind—to form the lid, that it scarcely affects the argument. Thrushes break snail shells by beating them on stones, and will come again and again to the same stone for the purpose. Some gulls and hoodie crows will carry shellfish high into the air and drop them on the rocks, thus breaking them. But nowhere do we find an instance of an animal taking a stick or stone and using it hammer-wise.

“ Man is the sole tool-using animal.

“ Nowhere do we see an animal with any cognisance of the future, laying a plan, choosing an end, and adapting means for their accomplishment.

“ Of course I know full well that this is a state-

¹ *Descent of Man*, vol. i, p. 124.

² *Mind in Evolution*, L. T. Hobhouse, pp. 239 et seq.

³ *Wasps, Social and Solitary*, S. O. and G. G. Peckham, p. 38.

ment which will raise protest. Birds make nests, I shall be told, for their future eggs and young. I know it : I accept the statement wholly, except for the single short word 'for,' which begs the whole question at issue. The 'for,' if it means anything, must mean 'because they know that the eggs and young are coming, and therefore make the necessary arrangements.' I maintain, on the contrary, that they have no such prevision at all : that they build their nests in response to an instinctive impulse—very occasionally and very slightly modified by perceptual (never by any conceptual) intelligence—with no thought or inkling of the future whatever. An evidence that this is so, is the almost exact reproduction of the nest common to the species, and choice of site, made by each individual.

"Perhaps the objector will prefer to cite the case of the *Sphex*, the solitary wasp, just mentioned. This creature makes extraordinary provision for its young, conveying into the burrow in which it lays its egg a store of caterpillars, stung to death or insensibility, to be the sustenance of the larva yet unborn. Can there be, we might be asked, a clearer case of prevision and of rational provision for a future need ? If this is not reason, what is it ?

"Undoubtedly it is instinct. Not only is it instinct which impels the insect to make these arrangements, but it should be especially observed that it is an impulse which could not conceivably be the result of any operation of the reason. If we turn to reason for its explanation we are asking

of reason a very great deal more than that faculty is able to give us. For, notice this—the Sphex in all probability is never to see its offspring, never to see the result of all this care. If these means are taken in order to achieve an end which is foreseen the foresight must be of the magical character. It is not the prediction of events which can be foreseen or foretold by any effort of finite reason. The Sphex has no experience of the result of its acts : they are prompted by no reasoned motive. Reason, even in its highest human development, is entirely inadequate to supply the motive. It is prompted by instinct alone.

“ And the same account has to be given of the more or less similar acts of a legion of other species that make provision for babies which the parents are never to see. No inference in support of the thesis that the animals have reason, even of the most rudimentary type, is to be drawn from these instances.

“ The animal that has been the most intimate friend of man for many thousands of years, and so might be deemed likely to pick up some crumbs of the human mentality is, of course, the dog. The result of the many observations and experiments in the canine intelligence that I have made have impressed me far less with the dog’s sagacity than with its narrowly restricted limits.

“ I had a hall in my house, with a gallery running along one side of it. Access to the gallery was by way of a staircase from the hall. I had a house-dog, of ordinary intelligence, who went up that staircase many times daily, for the gallery served

as a passage to other parts of the house. One day, as I was playing with the dog's toy, and with the dog itself, in the hall, it occurred to me to throw the toy, an indiarubber ring, up into the gallery. Of course I did not doubt that the dog would immediately run up the stairs after it. But not a bit of it. He did but stand below, jumping up to the gallery, barking for the ring. Once I had induced him to come to the stairs, and so to the ring, he was able to follow that same path the next time that I threw the ring into the gallery. It seemed to me that it was necessary, by this first teaching, to establish the relation in his brain between 'up the stairs' and 'ring,' before he could join them together for himself, although the way up the stairs to the gallery where the ring lay was familiar to him by a hundred goings and comings. Those goings and comings, however, had not hitherto been associated with the ring; and it seemed to require that that particular association should be formed before the dog could take the course which, humanly speaking, was supremely obvious.

"That is only a typical example out of an indefinite number which might be cited to show how narrowly restricted the dog's intelligence is, how far remote from reason.

"I would repeat, in order to impress the value of the reflection, that it is absolutely amazing—I would go so far as saying absolutely incredible—that the reasoning faculty, in the sense of a faculty to take means towards a foreseen end, in animals other than man has done so little in the way of

development that we are unable to find one solitary indubitable instance of it—if it really has existed potentially during all the millions of years that these animals have existed. That negative argument appeals to me more strongly than any of the positive ones which people who hold much the same view as mine have adduced in support of our common conclusions.

“ I am perfectly aware of one answer which will be made to the question why, if they have the potentiality, the animals have not actively developed conceptual thought. It will be said that such thoughts, and the forming of any concepts and general ideas at all, is dependent on the faculty of language, and that the mouth mechanism of the animals does not allow of their use of language. Even the simian jaw and palate, most like our own, we shall be told, are not of the right make for vocal sounds in any sufficient variety.

“ Perhaps not. Doubtless the apparatus is not so favourable to varied sounds even in the apes as in man. Still, they surely might do some little in that way. An American professor was so confident of their ability as actually to believe that they had a simple form of language, and set himself assiduously to study it; but with no success. Moreover there are other modes, other signs, besides the vocal ones, which are easily conceivable vehicles of thought. It is possible, besides, that the value of language has been a little overstated. Though any quick and convenient use of concepts and general terms, even in a man's own mind, still more so in exchange with the mind of another, is

doubtless impossible without language, it is conceivable that a simple and clumsy mode of conceptual thought might be carried on without it.

“ But the principal counter which I should use to this retort of the objector who takes a stand on the need of language, and the inability of other animals to speak, is that the asserted inability is not common to all. There is a large class, as I tried to show you by an object lesson this evening, including some of the most intelligent animals on earth, the birds, and especially the birds of the clever corvine genus, which can imitate almost every inflection of the human voice, and have a large number of additional vocal sounds of their own. Theirs might be really a richer than human vocabulary if only they had any ideas to express in it. That is their real lack—the ideas, not the sounds. If they, or the parrots, or starlings, or many more, have been hiding a rudiment of reason in their mentality all the millions of years of their existence it is quite sure that no lack of the means of vocal expression has stood in the way of its production. And according to all human means of judgment their intelligence is as high as that of any mammals. To be on safe ground, I will at least say, that in my own humble judgment—and I have kept these corvine and other birds as pets and observed them as closely as I could—they are certainly as clever as any of the rest. Mr. Hobhouse goes so far—a long step further than I can follow him—as to say of a parrot that it ‘undoubtedly uses words with intention.’¹ I have

¹ *Mind in Evolution*, p. 287.

much more than a doubt about the 'intention.' But there is no doubt whatever of the mechanical ability to make all the sounds necessary for the communication and for formation of concepts. The birds supply us with a perfect answer to those who tell us that it is because animals cannot talk that they cannot think conceptually.

"I do not wish to labour the point further. The human mind is, as I believe, a break, a new development, a new departure. That the *big* breaks are rare, that Nature is conservative, is economical with them, is evident, and it is well for us that it should be so. The little breaks, whether mutations or variations, are not so important as to invalidate biological science, a result which Professor Lindsay acutely says would necessarily follow from the full acceptance of Bergson's Creative Evolution.

"I do not claim a place among the 'big breaks' for the creation of the Universe in the first place, for we have no warrant for speaking or of thinking of any first place or beginning for it at all. It is really as impossible for our minds to conceive the idea of the absence, as of the beginning, of a Universe. But if we accept the occurrence, or even the possibility, of the big breaks, it is evident that this is an admission which at once opens out all sorts of possibilities quite beyond conception or forecast, even for terrestrial evolution. It is a startling thought, and one which throws the whole drama once again into something like a new perspective. Had there been in Mars, at the period before organic life appeared on the earth, a being gifted with a human intellect and a telescope

capable of observing closely terrestrial things, he would have had no 'earthly' reason—and probably no 'Martial' reason, either—to forecast the coming of that organic life. Neither, supposing him still observing the earth many millions of years later, when the human mind first appeared on it, would he have had any more cause to suspect the coming of that new and powerful agent. It is not altogether inconceivable that we, now, on the earth itself, may be going about quite unsuspecting of some similar new departure of which we may, for anything we can tell, be on the very verge. If only we can kick our plodding minds out of the ruts along which they crawl there are wonderful horizons possible to them, and above the horizon even now, if we can but realise it, who can say but that there may be coming the dawn of a new faculty, the Creator's last gift to the highest of His terrestrial creatures? "

Upon that Launceston folded up his papers. There was little subsequent discussion, and I took no further notes, but I observed that the Club was in an uncommonly thoughtful mood for quite half an hour afterwards.

CHAPTER III

LAUNCESTON'S CREED

"I'm a self-educated man. I was at Eton and Oxford." This scrap of autobiography was Launceston's. When I first began to jot down my shorthand notes of our meetings it was, as I have said, chiefly for the sake of getting facility in that art. Launceston's contributions were generally those which it amused me most to record, but up to now I had never been able to persuade him to read a first paper, as the opener of a debate. He would intervene, often in some striking and original manner—as, for instance, with the parrot which he had used for the confounding of poor old Sir James Macadam ; but to start a subject off his own bat was what he had always firmly declined to do. I was the more interested, therefore, when he consented to read us a paper on the subject which was suggested indirectly by Edward Thursby's tragic end. Yet, even so, it was not until after I had taken down both this and several of the papers with which he followed it, that I had any conception that I was recording more than some scattered, unrelated thoughts. It was by degrees, only, that I realised what was behind it all, that all were parts of a tolerably comprehensive view of most of the psychological and also some of the metaphysical

and a few of the social problems which beset the world. When I did begin, tardily, to discover his drift I dared so greatly as to tax him with it, and finally drew from him a confession, in a long confidential talk which was flattering from a man whose confidences were rare.

The claim that he made, for the conclusions from his arguments, was large enough. It was no less than a claim to have swept away the difficulties which exist for thinking men in accepting the idea of a transcendent power—let us shortly say a God—intervening, within certain limits, in the affairs of humanity on the earth. He claimed that a resolute brushing aside of the obstacles which impede thought and vision must in the first place make manifest the obvious limits set on that intervention, and in the second place show that within the limits the intervention was almost obviously certain and as inevitable as the limits themselves.

“It seems to me,” he said, “that a great part of our difficulty has been created by a search for an imagined unity where no unity is. Tilden,” he said (Tilden was one of our members, a mathematician of European repute), “will check me if my figures are incorrect, but I have always been led to believe that one and one make two. Our trouble, as I think, has arisen very largely from an illusive quest for something under the name of ‘simplicity,’ which would make one and one make one. But is that rightly called ‘simplicity’; as Aristotle might have asked, and should we not better call it by some other name? And shall we

call it 'confusion'? That is the result to which it appears to me that we have been led by the quest for unity in things which are essentially different. It has confounded counsel. So long as we are dealing with inanimate nature, that is to say, matter and energy, good—that is a unity perhaps, though we use two terms to describe the unity. When we deal with living nature we deal, of course, with matter and energy still, but also with something which is superadded—life. From the attempt to find the one in the other and to regard the latter as a product of the former, confusion has arisen of the kind that must arise when we try to add one and one and to make one of them. And yet again we have, in my humble opinion [I may observe that, whatever his virtues, humility was conspicuously absent from them] another sum in simple addition wrongly done when we try to make self-conscious life, the life of the reasoning man, one with the life of any other animal, his reason, his æsthetic, ethical, and religious sense a growth from the mentality of the other animals. This is, as I think, yet another error, which has led to incalculable confusion of thought and to difficulty of clear vision and grief of mind. These are three, they are not one—the inanimate matter, the animal life, and the self-conscious life. They are three, and not one."

It was very much against Launceston's natural grain to talk as if he took himself at all seriously, but I do know that he was serious in this, that he regarded it as a serious contribution to thought, if only men would regard it seriously and accept its

logical consequences. He considered that he had made many of the chief problems of life very much more simple for himself by this conclusion which he had reached, and was confident that it would bring equal help to others, if others could make it their own.

“Of course,” he said, “we all know that it was a cruel shock for religion when science, about the middle of the last century, finally put the book of Genesis on the shelf, so far as the creation of man’s body was concerned, and about the same time the evolutionists piously believed that the discovery of the evolution of life out of inorganic matter was only a matter of a little further search. Since that date we have pushed our inquiries into the ultimate character of matter a good deal further, thanks largely to the radio-active discoveries of the Curies and others. But, while we have pushed these inquiries further back, it is not at all in the direction of the discovery of life in inorganic matter, or of the linking of the two together. On the contrary, the further we push back these inquiries, the further they seem to lead us away from everything like life.

“But at the moment I am speaking of it is easy to see what a deadly significance these conclusions of the evolutionists had. They did grand work, of course, building solid bricks into a structure of truth which was to prove something very different when it was done from what they thought, and is probably nearly as different from what we who have added a brick or two believe it. But certainly their conclusion really did point, for them, to

something very like materialism. Certainly (without any qualifying 'almost') those conclusions pointed them right away from the possibility of any special creation, after the first act (if that might be called an act of creation) which set the whole thing going. Organic matter was a development of inorganic, man's mind a development of beast's mind.

"That was their belief, and there was no room in it at all for a God that had any care for His creation. It was rather a deadly creed. And in its deadliness we have been struggling, without much effective getting out, ever since ; for because every rational person must concede that the human body has been evolved from the beast body, that unquestionable fact has given much support to what I believe to be just as unquestionably the fiction that the human mind has been evolved from the beast mind. Science is more and more coming to the conviction that life is an entirely different thing from, is something added, over and above to, inanimate matter. I believe that she will very soon become equally convinced that the human mind and all the qualities in which the man is higher than the beast are entirely different from anything bearing the appearance of mentality which we see in the beast and not by any means a mere growth from it or development of it. I believe it is only, or largely, the cult of that blessed word 'uniformity' which has nourished the delusion that beast mentality and human mentality are allied by an evolutionary link. I do not for a moment believe in the alliance, and I am

prepared to do every kind of battle in opposition to it."

That was Launceston's creed, his battle-cry, pronounced in what struck me as tolerably serious words, and of the more gravity as coming from the mouth of a man who commonly saw himself and his thoughts and the whole of life rather in the light of a joke, and not a very good joke at that.

"Well," I said, "here you are then, right on the track of some excellent stuff for our Thursdays—better than the Life and Death suggestion, as it seems to me."

"Well," he echoed, "I might try—yes. The only thing is, it is all so long and so deadly dull. And life and Thursday evenings are so short."

"It's a good audience," I said.

"D'you call old Foljambe good audience?"

"Who brought Foljambe into the Club?" I asked.

If you go down St. James's Street and look into the bow windows of the Clubs on either side of you, you will see old Foljambes, or young, or middle-aged Foljambes sitting in every one of them. They are all red-faced, shaved in the same fashion and dressed exactly alike, each to other, and like everybody else in St. James's Street; and what such an one could be doing in such a place as our shabby little Fortnightly Club might very well be wondered. But Launceston had brought him in—you never could tell what Launceston might not do—he had brought him in just as he had brought in his parrot to poor old Macadam's undoing. He had told us, before he brought him: "I have

found a new kind of animal, a native of St. James's Street." 'Foljambe of St. James's Street' was the title by which Launceston always referred to his friend. The distribution of animals is an affair of habitat which depends on the food-supply and so on, and though this was quite a new animal in our Bloomsbury it was very common, as I have said, in St. James's Street. It was, in fact, a product of Eton and Oxford; but then so too, extraordinary to say, was Launceston. Only, Foljambe was of the type, as decidedly Launceston—untidily dressed, with wisp of iron-grey hair rebelling against restraint and tumbling over his forehead below his hat—was not. It was on his examination as expert witness in a case involving some chemical problem on which he was an authority that Launceston had been asked where he was educated and had replied in the words at the head of this chapter: "I am a self-educated man," adding, as by an afterthought: "I was at Eton and Oxford."

So, after Launceston had delivered one of his harangues about everything in the world and far beyond it, Foljambe's general comment was an ejaculatory outburst of "I never heard such d—d nonsense in the whole course of my life"—comment received by Launceston with ecstatic enjoyment. It was strange, that even a hint of a doubt or criticism directed on his most extravagant speculations by Macadam could drive him into an almost childish fury, while he would do nothing but laugh at Foljambe. The truth is that Foljambe really was laughable and quite absurd, not for a

moment to be taken seriously by any sensible person.

“I’m not at all prepared to say,” Launceston went on, “that Foljambe’s mental processes are very much farther advanced than those of the other animals. By the bye, Huxley has a very good essay on *Animals as Automata*: I think arising from criticism of Descartes. Descartes would have it that animals—by which he means animals other than man—act in perfect unconsciousness, almost as a plant reacts to light, by simple reflex action, without simple sensation. Thus, he denies animals the sense of pain even. Huxley does not go so far as this, though he does go so far as to say that Descartes’ view is a tenable one, and a view which is much reinforced by evidence collected since Descartes put it forward. What Huxley seems to hold is that beasts really are automata, and act as such, but that sensation, emotion, and even ‘ideas as far as they have them’—I think that is his phrase—accompany their acts. Thus, he would not say that they acted in consequence of the sensation, etc., but only that the sensation went with the action. He, with Descartes, would have the action to be automatic; only, he would say that the automata are sensitive.

“And so would most of us, surely. Indeed, I could go a good deal farther than Huxley, and still do no damage to my view that the soul, including the mind, of man is something as different from anything that we find in other animals as life is from inorganic matter. I would even say that animals may act in consequence of their

sensations and their emotions ; but, as for their ideas ' as far as they have them,' I would contend that they have them not at all. They form no brain pictures. I see no evidence for it. I see much evidence, both positive and negative, against."

" Why, d—n it all, I never heard such nonsense in my life. D'you mean to say, that when I've shot a bird and tell my dog to go and fetch it, he's no idea of what I mean him to do ? "

" Hullo, old man," said Launceston, with a smile slowly winding about his long face, as he turned to greet Foljambe, who had come in by the door at his back. " Always glad to hear some of your healthy criticism. But yes, that's just what I do mean—that your dog, if he's a well-broken dog, goes and picks up a bird when you tell him to without having an idea in his head."

" I tell you what it is," Foljambe replied, explosively spluttering in his indignation, " you'd better take care what ideas you're getting into your own head. If you don't take care you'll some day find yourself believing some of the d—d nonsense you talk."

Launceston's smile broadened yet again. " You'll be very careful you don't believe any of it, old man, won't you ? " he chaffed.

" Thank God I've got my head too well screwed on for that," said Foljambe piously.

" Then mind you don't lose your head, old fellow. Keep it screwed on. If you were to lose it, it would be a terrible affair for anyone who happened to find it."

CHAPTER IV

THE GREAT COOK AND THE LITTLE COOK

AFTER much tactful worrying I wound Launceston up to a definite promise and date. He wouldn't tell me anything about the mode in which he proposed to treat his subject. He turned the point—bluntly or nicely, according to his mood—of all my inquiries. Eventually he said, with an air of concluding the whole matter, "I'm going to give you a culinary lecture: leave it at that." And at that I had perforce to leave it.

"It was proposed to me," he began, at the opening of his address, "that I should try to find a few words to say to you on the subject of life and death: I have tried. I have to confess that I have ignominiously failed. It is not at all in the finding of words that I have failed. They come all too readily. That is, in fact, the trouble—I have found it totally beyond my power to make them few. I shall have to be long, probably I shall be tedious. I see occasions for strenuous debate arising by the way, which might delay us so interminably that we might never reach a terminus unless we can shove them, for the moment, into a side-track as we go. And for the moment I propose to strike out the second term in the subject as suggested to me. Life, surely, for the present

is enough. Let us try to deal with death a little later.

“There’s no use,” he continued, “in talking in long words about the ultimate problems. Either you must leave them alone or you’d better talk of them in the simplest language, like a little child. Therefore I want to talk to you in the most childish language possible, because I believe it is the best, the language which goes most near to expressing our understanding (or misunderstanding) of the problem, and therefore the wisest and the deepest language. The word ‘creation’ itself is a childish one, begging, so far as we attach any clear meaning to it, the most primal question of all. Indeed, the meaning which it begs is about all the real meaning that does attach to it. And yet it is the simplest word, therefore the best to use, for the ground that it covers in our thought.

“The long words, the philosophical language, are only a camouflage of ignorance, hiding a man’s ignorance even from his own sight, and so making it twice as bad as ever. Deep thinking and plain speaking is the ideal, if we could get it. Let us talk about it in cooks’ talk for a minute or two—that will do as well as any other. If you are going to be of the school of those who believe that, in creation, all was ‘given’ from the first; that all—even the latest development, which at the present moment of this planet’s story happens to be man—was implied, which means folded up, in the ultimate atom, whatever that may be, then you have to regard that atom, or collection of atoms, as something thrown into the universal

ether (query : was there, is there, a universal ether ?) much as a cook throws something into a cauldron and lets it boil.

“ My way of regarding what has gone on is quite different from the way of those, perhaps the only true and pious evolutionists, who put all their faith in the unfolding, the unrolling of the atom. It looks much more to me then—it does not in the least matter how many, if any, of you will agree with me—that the way the story went is on this wise : Accepting the nebular hypothesis, the nebulous flaming mass was thrown into the cauldron. Good, I’m ready to accept that, though its acceptance leaves me cold, no matter how it flames. It is too remote to affect my pulse. Then it cooled : thence came water and land : so far I go with all the modern editors of books of genesis. But now, here, I make my first departure. I cannot understand—no, that is a foolish word, for of course I cannot understand—what I mean is that I cannot *believe* that out of the mineral corpse came life by simple process of unrolling. No, my belief rather is that here the Great Cook meddled, chucked a new element into the cauldron, to better season the earth broth, chucked in life. But, mind you, it was only here that He could chuck life, as we know it, in to do any good. The plant needed the chemical mineral ; needed, too, the sun’s light piercing the primal fog that must have been worse than any of modern London’s smoke over the earth. Life could not sustain itself without these constituents.

“ Of course the other folk, the simple unfolders,

will say that the potential life was always there, but it was at this point only that it showed itself, because it was only at this point that it could find those needful constituents. Let them say. I am willing to let them, on consideration that they let me have my say. What do you say, Dr. Macadam? Do you challenge me?"

The old man looked up, astonished at the unexpected appeal, with two puzzled, wise old eyes under grey shaggy brows, like a Dandie Dinmont terrier of the Pepper colouring. "Maist certainly," he said, "I challenge it. There's nae reason to suppose a break between the organised and the inorganic. We have no' found it yet—the connecting link, the passage frae the inanimate to the animate. But we shall find it. Science shall find it. *Natura non fecit saltum*. Nature does not jump."

"Thank you, Dr. Macadam," said Launceston, with a sarcastic politeness in which the irony was far more obvious than the courtesy. "That is precisely the position that I supposed you would take up. You state it perfectly. For the moment I do not propose to deal with it; but just put it away in your minds, if you please, good people," he said to his audience at large: "docket it, if you please, as 'Challenge No. 1.' I should like to duel it out with Dr. Macadam at some other time. It does not, however, affect the main line along which we are going, since it is obvious that in some way or other life, and all that it has meant, did find its way into the soup. Even Dr. Macadam, I suppose, will not deny that?" Launceston paused a

moment and looked at the old Scotsman ; but the grey eyebrows made a twitch or two and he gave no other sign of noticing the question.

“ Well, then,” resumed the speaker, “ from that point onward things went quite orderly in that little affair of world cookery which we call evolution ; plant was employed in the service of lower animal life, because plant could take its sustenance from the inorganic, from the mineral and from the sunshine, as animal could not take it directly, and lower animal was cooked up into higher, until suddenly—and here, if I mistake not, we come to ‘ Challenge No. 2 ’ which Dr. Macadam will deliver me—suddenly the Great Cook threw an entirely new ingredient into the soup, an ingredient of much more importance, because it made much more difference to all the future boiling than even that other, which I have called life—he threw into the soup nothing less than a Little Cook. He threw in the human reason. And this new ingredient, man with his reason, I call nothing less than a little cook, because it is manifest that man began to deal with the other ingredients in a way that they never, all through the previous boiling, had been treated. Now what do you say to that, Dr. Macadam ? Do you take that up as Challenge No. 2 ? ”

The old man, forewarned, was more ready with his answer this time : “ As surely as man’s physical structure is developed from that of the lower animals, so surely has his mind developed similarly. *Natura*, as I observed before, *non fecit saltum*. ”

“ Thanks, Dr. Macadam,” Launceston said cour-

teously. "That is all that I wished to know. I am inclined to think Nature's agility a little underrated by some of your school. No matter.

"Of course I know that I am, as many people would say, outraging decency by talking of the Great Cook, instead of saying the Absolute, or God, or whatever other name you please to choose to conceal your ignorance. The one is probably just as much like the truth (whatever you mean by truth) as another, except that you really do, I think, get less meaning out of 'the Absolute,' than out of any of the rest, just because you, who use it, are the very opposite of the absolute—that is to say, are relative and finite, so that when you begin to talk of the absolute and of infinity it is very nearly certain, and quite as certain as anything except mathematical truth can be, that you are talking nonsense, saying words and phrases that convey no valuable meaning either to yourself or to another finite thing. I daresay a quibbler might tell me that I ought not to use the terms 'relative' and 'finite' if I deny sense to the terms 'absolute' and 'infinite,' because those latter are really only relative to the former. I know that; but I do maintain still that it is possible for us to have a better understanding of what we mean by one of the terms of a relative than of the other, and I maintain that we can understand the finite terms very much more clearly than we can the infinite in this life.

"But, as I say—the little cook was introduced, and, at once, enormous change in the further cookery of the soup! Nor does it matter on what

hypothesis we realise it, whether on the unfolding or on the new and ever active creation theory. On either hypothesis we have to realise, however he came, that this little cook did come, and to realise the vast differences made by his coming. Perhaps it never has been realised of him sufficiently how immense the difference was, though lack of appreciating his importance is not one of his common faults.

“ One of the weaknesses—probably it has to be accounted to him as a weakness—of the little cook is that one of his speculations is that it is for his sake that the Great Cook originally made the soup, and has kept it simmering so long ; but his puzzle about it is, so long as he can keep a rational modesty of outlook, how it can be possible that he, such as he is, such a very little and often, as he is obliged to confess, such a very bad cook, is worth it all. Can it be, he asks himself again and again, that he is the final form of the dish, that it is, now that he has been thrown into it, ready, without a great deal more garnishing, to be served up at the table ? It is hardly conceivable to him, in such moments of humility as he happens on when he regards the condition of the soup as the result of the Great War, that it can be so ; and so, of course, he begins to ask ‘ What then ? ’ To what dish of perfection is he to think that the soup-making is tending ? And, especially—for he is nothing if not an egotistic little cook—what his place is going to be in the final dishing up. Is it a finality which is to be reached in this present universal plan ; is he to be a party to it ; or is he—this is his fine

hope—to be taken out, selected as by a special favour of the Great Cook, from this present soup and to be given some exalted place and duty in quite other concoctions? That is his hope, and now and then comes to him a very blessed sense of assurance that it is so to be with him, for at noble moments he is able to feel himself very sensibly still in the hand of the Great Cook, not altogether thrown from Him and abandoned in the broth.

“It is practically sure, at all events, that if it were conceivable (which it is not) that this gift of what we call reason (for that, of course, is what this little cook means) had been bestowed on any other product, at any other date, of evolution—say on the solid mineral thing, or the plant, or the living creature preceding man—that bit of clay or of vegetable or of animate matter, whichever it might have been, would have supposed itself the final act, the *dénouement* to which all the drama tended. At least it would have had just as much, and just the same (slight enough to be sure) warrant for believing it as man, the little cook, has.

“And, that being so, it is apparent that we are up against a surprising and even a rather appalling possibility. For the mineral would have supposed itself the final act, just at the moment maybe when the plant, which was about to batten and fatten on the mineral, plus the light, was ushered on to the stage, or thrown into the broth. So again the plant or the lower animal, if reason could have come their way—without an idea of this horrible little cook about to be introduced to play all sorts

of pseudo-creative tricks with them in manipulation of the stuff of the broth ! And, that being so, once again, what warrant have we that even now, on top of us, the cooks, is not about to be introduced something (naturally we cannot imagine of what kind) which will similarly manipulate and batten on us ? I do not say that it is so. I think probably it is not. But who is to deny its possibility ? We are in the hands of the Great Cook and we do not in the least know what he has in His store-cupboard, nor what ingredients He may not, even now, quite without our knowledge, be putting in.

“ There is even a suspicion permeating in the minds of us, the little cooks, that some such new introduction even now is in process of being made. We have an idea of influences from what is rather foolishly called the astral plane (but it is as good a term for our ignorance perhaps as another) penetrating the terrestrial. It may be coming ; it may be, to some extent, here. At all events do not be put off by the rubbish talked by those of its opponents who write themselves down either as men of sturdy common sense or else as men guided by the pure light (pure ! save the mark !) of reason and point out to us that this idea of communication by channels supra- or subter-sensual with something that neither our senses nor our intellects can reveal to us is a very old story. It is not. It is just as old as men who have been telling any story that has come down to us ; but that means only a very short time indeed as measured by the spaces of time that this earth broth has been cooking.

Don't make any mistake about that : the Great Cook is in no hurry about his final dishing up, whatever the final dish may be. He doesn't take his time, he takes his eternity, over the job. So when you hear these sturdy common-sense men or those glittering intellectualists talking to you about the ' hoary wisdom of the East,' and pointing out that some of the mystics of to-day are only reviving a story as old as the world, reply to them that all we know traditionally or by written record of the thoughts of men who have gone before us is very very new and recent knowledge. Grant, if you like, that the traditions go back five thousand, even ten thousand, years : what is that ? A nothing, a span scarcely to be considered in the years that even the little cook has been working in and at the broth. Just how long he has been thrown in and has been working we cannot know very exactly, but we can make an approximate guess. What that guess is and the way we arrive at it I must leave over for another opportunity, if another shall come. Unfortunately, we little cooks are not like the Great Cook. It is time, not eternity, we have to take for our jobs, even for our lectures. How does it strike you—is it time I have taken over this, or is it eternity ?

“ And then the question comes finally—I mean, finally so far as this present cooking lesson is concerned, not with any absolute finality—if there is any such absolute. Is there really any cauldron at all, that is to say, any form of thought into which the universe is cast, and further, is there, after all, any Great Cook and any soup, the one apart from

the other, or is it not all just soup and the Great Cook in the soup and of the soup?—I speak, I hope with reverence—the soup and the Cook just aspects one of the other? I am posing the question, as you will observe, which some others have phrased differently—as to whether the Creative Spirit is transcendent or immanent—*l'univers Dieu*. My personal preference is for believing Him both.”

Sir James Macadam had been listening with a deepening expression of disgust on his usually benevolent old face, as Launceston spoke. Though he was not generally at all ready in debate, it was he who now first intervened, asking in his strong Scottish tones :

“Do I understand that you suppose man is able to thwart the design of the power that you imagine as his Creator?”

Launceston turned upon him with the extraordinary irritation which the old gentleman's objections always aroused in him.

“Oh come, come, you can't be such a fool as to suppose that I suggested such an idea as that.”

The insult was gross, and the tone in which it was given even aggravated the offence of the words. As a rule Macadam received Launceston's many affronts with a pachydermatous indifference, but this was too crude and rude even for his philosophy. He rose slowly from his chair, and, without saying a word, walked out of the room.

“I ought not to have said that, I know I ought not,” Launceston admitted; “but I know I shall go mad some day, and I know that Sir James Macadam will be the cause.”

Someone took up another point in his address, on which he welcomed debate quite reasonably, and so, for the time being, the matter passed. Macadam nevertheless felt so aggrieved, not without cause, that he wrote to the Committee submitting that the word 'fool' applied by one member to another transgressed the bounds of offence which could be tolerated, and that he thought the Committee should call upon the offending member to apologise and withdraw. That was also the unanimous opinion of the Committee. I was instructed to write to Launceston on the Committee's behalf and tell him so. Which done, there came back an answer in terms of thin courtesy, under which the irony lay very obvious, saying, amongst much else: "I fear that my expression laid me open to misunderstanding. So very far was I from calling our revered fellow-member a fool that I explicitly stated my opinion that it was impossible he could be so foolish as his question to me suggested. I would observe that not only did my remark do full justice to his intelligence but that, in the light of further evidence, it would appear that I paid it even too high a compliment, for I have learnt that in subsequent conversation he actually repeated his conviction that I believed it possible for man seriously to thwart the intention of the Creator."

There was much more, but not very close to the point, and the Committee, in some doubt what to do, instructed me to write to Sir James throwing a pleasant gloss over Launceston's explanation, stating that he affirmed he had been misunderstood

and that he had no intention of impugning the intelligence of one whom he wrote of as a 'revered fellow member.' I composed the letter with some conscience-pricking over its essential insincerity, but it achieved its aim. Sir James, perhaps mollified by the 'revered fellow member' phrase, appeared to accept my varnished version for the true bed-rock, and we heard no more about it. He met Launceston in the Club as if there had been no trouble. Nevertheless, it had the effect on our debates that the 'challenges' proposed and accepted were not brought to an issue. They, together with the 'regrettable incident,' lapsed below the horizon.

CHAPTER V

ANIMAL PSYCHOLOGY

WHEN Launceston consented to give us a lecture, or an 'opening' for a Thursday debate, under the title *Animal Psychology*, we wondered, because we knew his envenomed hate of sounding phrase. He was accustomed to express fierce contempt of long and fine words such as are used (according to his contention) to obscure understanding and to darken counsel. Why should he entitle his theme *Animal Psychology*, when he might equally call it *The Mind of Beasts*? The latter would have been far more in his mode. With the very first sentence of his lecture we understood, for he began :

"What I like about this subject title, *Animal Psychology*, is that it is a title indicating, as I think, *logos*—that is to say, jaw—about a *psyche*, which is a Snark, a Boojum, a Mrs. Harris—anything that you like that is fictitious and non-existent.

"Another way of stating the problem, not quite so foolish, because it doesn't introduce such a great pretentious Greek word is, 'Do Animals reason?' In both, the use of the word 'animal' is foolish, unless explanation is given of the limited sense in which it is used, because, of course, man is an animal. He thinks himself the very last word in

animal life, the triumph to which all the rest is only prelude. But what 'animal,' as used here, means is animals other than man. So let us understand it. The question, then, to pose it in its popular form, is—'Do these other animals reason?'

"I am nearly sure that the answer must be 'No.' And this I say, though I am very well aware that of the many ways—all easy—of achieving unpopularity, none is more sure and swift than maintaining that dogs and the other creatures rather lower in evolution's scale than man are destitute of even the most feeble spark of a faculty deserving the name of reason. You are scouted, not merely as a foolish, but also as a hard and unsympathetic person, on venturing any such assertion. Even I, than whom none possibly can be more fatuous in devotion to a canine friend, have suffered sorely from such accusation. And forthwith the company in which you hazard such an opinion will begin to tell you tales of the wonders of intelligence performed by dogs which they have owned, or with which they have the privilege of acquaintance: as if all of us had not possessed, at one time or other, our canine prodigies, of which we can relate marvels! Then some intellectual debater, worthily seeking to lift the debate to a higher level, puts in: 'But, my dear fellow, you say animals have no reason—let us leave the dogs for a moment, and look at the hymenopterous insects, ants, bees, wasps. Do you mean to say that, with all your reason, you could build a thing so well adapted to its purpose as the comb, with its six-sided cells, of the honey-bee? Look at the

solitary wasps, how they lay up store of caterpillars, stung to death, or just paralysed, so as to put them into a kind of live storage for their young ones whom they never will see ! Do you mean to say all that does not show reasoning power ?'

" That is the kind of argument you are very apt to hear, and if it is delivered with sufficient decision and fluency and in a sufficiently loud voice, it carries an enormous conviction, and is nearly sure to 'put the lid,' so to say, on your unpopularity with that audience. The answer to it is, of course, that they—that is to say, the miracles of apparent wisdom performed by the honey-bees and the rest of them—show almost every other kind of miracle except reason ; but, as for reason, that they show none of it at all. It is abundantly evident that their doings are directed by something quite different from reason, something that operates in quite a different way. How could reason possibly direct the solitary wasp to store up caterpillars for the use of a larva that it has never seen, that it never will see ? Reason, we are told, proceeds from the known to the unknown. The wasp has never had the opportunity, even if it had the faculty, of knowing anything about this larva. How should reason, then, teach it to store food for it ? And, of course, our argumentative friend was quite right in his question about the honey-bee : you might worry your reason till you had brain fever or had written all the plays of Shakespeare, but still you could never have reasoned out the fact which the honey-bee has taught you, that by giving an ordinary worker grub a different class of

food and a rather more palatial liberality of cell-wall within which to grow royally fat, you could breed it up into a queen. Wheresoever you are going to rank it in the psychic scale, it is not reason, but some faculty quite different, which teaches the honey-bee this. Rather, let us say, to avoid trouble—which makes the honey-bee behave as if it had this wonderful knowledge, for that is really the phenomenon which we observe—the action of a worker who is totally unconscious of the end which her action serves.

“If you have succeeded in ‘keeping your end up’ in the debate so far as this, and have not been clean given ‘out’ by the umpire of public opinion, it is quite probable that some other conscientious objector to your theory of the unreason of the lower animals will try to bowl you out with a new kind of ball: ‘But surely you don’t mean to say that animals have no memory! And isn’t memory a kind of reason?’

“The answer to the latter part of the question is in the negative: memory certainly is no kind of reason, although it is probably true that any reasoning process would be impossible without memory in some form as its basis; but as to the first part of the question, of course the other animals have memory. For what, after all, is instinct, except memory? Instinct is compact of memory; memory is the stuff it is made of—memory, not of the individual alone, but of all the generations that have gone before to the making of that individual, and to the making of its habits. For what is habit but memory in action? And instinct is the stored and inherited

memory of the race. That is why it is so extraordinarily effective ; in some ways and details so very much more effective than reason. In other ways it fails remarkably, for instinct is so bound in memory's fetters, in the inherited habit, that it cannot stir out of its bonds, but must do its appointed task, even though in circumstances which make the task not only a useless but a fatal one. For example of instinct working uselessly, we may cite these solitary wasps again, which will go to the pains of sealing up the grubs which they have brought for the sustenance of their young, even though they have not laid in the cell the egg from which this young one, so amply provided for, might be hatched.

“ Yet animals, doubtless, have a manner of acting which looks again and again as if some gleam of reason must be inspiring it. I have a small dog-friend, a Sealyham, by name Joey, by nature a compound of all that is most charming and most knavish in dog kind. He has a rough and tough rag-doll, which he loves to worry. The doll, known as Cousin Susie, lives on a shelf in a cupboard, with closed doors, whence it is now and again taken, and given to Joey to play with. Often Joey, when no one is taking notice of him, is to be found sitting up and begging before the cupboard door, now and then giving a high-pitched, very plaintive whine, asking, as plainly as he knows how, for Cousin Susie. What are we to think about the psychology of that ? It all has a look as if he were representing to himself, in his little mind, Cousin Susie lying there on the shelf, and that he

knew that if he were to sit up and beg for it like this he would be bound to soften the heart of anything but a human stone. The human softening, be it said at once, seldom fails, but as for the canine psychology of the comedy, we may doubt whether that is played out quite as it appears to be. Doubtless, Joey is aware of Susie's presence there, on the shelf: memory would help him in that, and, besides, he has a nose to which cupboard doors present no bar. Probably he has a simple olfactory sense of Susie in the first place, rather than any mental picture. Then, doubtless, much happy experience has taught him that the act of sitting-up on his hinder end, and begging, is associated with the attainment of some, at least, of his desires. That explains the prayerful pose; and the whines are no more than the involuntary canine utterances of hope and eagerness. All is explicable by processes involving no exercise of that great gift of reason which surely is a human faculty. Only, I speak of the creatures of this earth, where we know them. How it may be on other planets we have still to learn.

"I generally notice that a low groan, audible to everybody except the narrator, begins to go round the company when a man starts a dog-story. That means that of these we have had enough; we are as ripe for boredom therein as we are for incredulity in a fish-story. Yet it is to the dog that man naturally turns for his instance when any question arises about the intelligence of animals of other than his own kind, because the dog is his constant companion, always under his observa-

tion, his servant and helper ; and not only is so now, but has so been during all the ages of history, and was so, as the geological record shows, before a page of history was written. Chiefly to his dog, occasionally to his cat, and now and then to his horse, man will turn for his examples, and has even grown so used to turning to them that it comes to him almost as a new idea when it is suggested that these do not have a monopoly of all that approaches the human in mentality. The others, for most debates, simply do not count ; they are a neglected quantity.

“ But really, though neglected, they are far from negligible in this regard. Mr. Hobhouse, who is one of the relatively few who have given close study to the psychology of lower animals, puts some of the higher apes and the elephant above our familiar friends in the mental scale. He even claims for them the possession of a first beginning of conceptual, as opposed to merely perceptual, thought. For my own part, I have never had the privilege of a ‘ higher ape ’ or of an elephant as a friend. They are too high for me. But I have observed humbler folk with what attention I might, and also have taken note of the attitude of mind of humankind towards them, and have seen the strongest exhibitions of astonishment on the part of humans when the others have shown any intelligence at all. I remember that almost the first opening of my eyes to the singular point of view of men towards ‘ these others ’ was when a relative of my own exclaimed in much surprise, ‘ He seems to know you ! ’ The ‘ he ’ in question

was a tortoise. 'Well,' I said, 'of course. What would you expect?' The beast had been my daily companion and friend. He had his eyes—not large, perhaps, but bright, though they were small—and he had his memory. Of course he knew me. Possibly someone who has no tortoise among his friends may ask how he showed his knowledge. He showed it, as every tortoise does, by keeping his head thrust well out from under his shell and surveying his world confidently. In the presence even of a dog whom he knew well he would do this, but in the presence of the stranger, human or canine, back went his head under the protection of his shell—he 'went home,' as a young acquaintance of mine says of it.

"Once my notice was directed to this queer view which most people take of animal intelligence I found every instance confirming it. In the case of any of the animals, except of the common domestic kind, they are quite surprised when they see them distinguishing between one human being and another, between a known person and an unknown. It even astonishes them to see the commotion that a stranger's coming makes in the poultry-yard, while the gardener or the cowman can go amongst the fowl without creating any trouble. That a canary or a parrot should know their friends they think something of a marvel. What I should like to find out—and should be grateful for instances in point—is how low in the scale this kind of knowledge goes. I believe that we should find it beginning very early. All of us who have made with

the wild things such friendships as they will admit us to must be aware how trustfully birds or squirrels in a garden will come to the very hand of people whom they know and from whom they have learnt that no harm is to be feared. Watch a river-keeper at a fish-hatchery—he will go along the nursery where the young fish are kept, and the whole surface of the water will be a-boil with the fishes struggling up and jostling each other in the expectation of the savoury meat he often doles out to them. And now go along the waterside yourself, and see—every fish has gone to its hiding-place, fleeing from your unfamiliar apparition! Fish, then, know their human friends—sufficiently at least to discriminate between known and unknown persons. Of mammals we cannot doubt at least an equal intelligence, and no one who has any acquaintance at all with bees can be sceptical about their power of distinguishing. I have experimented with ants to see whether they discriminate likewise, but never succeeded in getting any conclusive result. The mining ants become so perturbed when you let in on them even the minimum of light necessary for seeing what they are doing that it is hardly possible to draw any sound inference from their behaviour, and the wood ants, which are daylight workers, are more difficult to keep in confinement. I have not had them long enough, perhaps, to make friends. But the instance of the bees in itself is enough to show that insects are capable of drawing this distinction. I expect that we should find it among the molluscs.

“But, of course, in all this it is most necessary,

to a right understanding of the subject, that we accept the word 'know' with all requisite modification and reserve. Words are not solid realities : far from it, they are only the signs we use to communicate with others about phenomena, and we hardly know whether any phenomena are the same for any two persons. At least we think we know this, that if we see a tree in full leaf and say to a person with a certain kind of colour-blindness : ' Look—there's a tree,' the thing he will see will give him the impression not of a green thing but of a red thing. Nevertheless, in communications between human beings of normal faculties, when one uses a word he believes that the other will receive from it some impression very like that which it makes on his own mind. But that is not to be said when we use the word in connection with an animal of faculties and organs so unlike our own as a bee or a fish. When we say of the fish that he ' knows Peter '—the keeper—' from Paul '—the angler, what we ought to mean, fishily speaking, is probably something like this—that the dark silhouette against the sky, which is the kind of vision of the terrestrial object that the fish has of Peter, is a familiar object along with the rest of the common objects of the water-side. It is even better than familiar, for it is associated with that nicely piquant dinner of none too fresh horseflesh which is cast upon the waters now and again coincidently with the apparition of Peter's silhouette. The silhouette of Paul, on the other hand, who does not come down the nursery once for fifty times of Peter's coming, is quite unfamiliar,

and has no such savoury associations. So away the fish go, scared by the strange sight. And to show that their knowledge of Peter is something quite different from the kind of identification by which we know one of our acquaintance from another, it needs only to see the behaviour of these same fish when they are turned out into the river and Peter comes down the bank. In that new environment his is no familiar or friendly appearance. They know him no longer. They flee from him as if he were as strange as Paul himself. Fish identify familiar appearances, no doubt, by sight, though with an angle and other details of vision different from ours: so, too, the birds, and so, as it seems, the reptiles—the tortoises and those grass snakes which we used to keep surreptitiously at school. But with the rest it seems as if the ultimate identification sense in almost every case is the olfactory. This is true of the dog, cat, horse, cow—almost certainly it is true of the bee, and probably we should find it so of all the insects. In this short space it is impossible to do more than just touch the edge and indicate the scope of a subject as large as this. Of course, the identification faculty, so to call it, is only one among many modes of their intelligence, but it is one of the most interesting, because it is the possible first stage in that distinction between self and not-self which means so very much.”

CHAPTER VI

ANIMATE MATTER AND HUMAN REASON

FROM the very beginning of Launceston's remarks Foljambe had quite obviously and even audibly been in something like the condition of a highly pressed boiler with an ill-secured safety-valve. At every other moment there had escaped from him such utterances as 'Tchah' and 'Bah,' with other slightly more articulate ejaculations as 'Nonsense!' 'What the devil?' 'Rot,' and so forth—small sputtering out-jets as it were of the steam that was pent up within him. But as soon as ever Launceston stopped and sat down the safety-valve flew right off and he exploded freely.

"Now what the devil?" he exclaimed, out of a face empurpled by his inward fury. "I never heard such a pack of nonsense in the whole course of my life. Can't think what in the world the fellow imagines he's driving at. Instinct, indeed! Reason! Let me tell you that I'd far rather have the instinct of a great many dogs that I've known—yes, dash it, if I wouldn't rather have the instinct of every dog that ever I have known—than I would have the reason—reason he calls it!" the speaker repeated on a fine note of sarcasm—"of such a fellow as Launceston. What will a dog not do for a man, I'd like to know? What

62 ANIMATE MATTER AND HUMAN REASON

man, or what woman either, for that matter, can be better friend to a man than a dog? A dog'll retrieve for a man, a dog'll point game for a man, a dog'll fetch and carry for a man, a dog'll die for a man. What man, I'd like to know, would do all that for another man—or woman either? A horse'll gallop himself to death for a man. If there's no reason in all this, if it's all instinct, all I can say is I don't want your reason. Give me instinct."

Some of us, I imagine, had been a little alarmed at first by the violence of the Foljambe explosion, but we were quite relieved by the effect that it was visibly producing on the victim against whom it was directed. The lines of Launceston's face did not readily fall into the pleasant curves that indicate satisfaction; but now, as Foljambe spoke, they exhibited all the contentment that it was possible for them to express. The lines about his deep-set eyes, which were always far more responsive than those of his grim and closely shut mouth, bent themselves into a smile of benediction on the infuriated orator.

"My dear Foljambe," he said genially, as soon as he might be heard through the other's sputter, "thank you so very much for your contribution. There could not possibly be a better instance of the kind of argument by which people try to prove that reason came out of instinct. 'Give me instinct!' you say. My dear fellow, you are the last man that need utter such a prayer as that. Instinct is exactly what has been given you. You are essentially, almost exclusively, an instinctive

man. You go by habit, which is only another way of saying by instinct. You have not the least cause to fear that you will ever be given reason."

Extraordinarily perplexed, Foljambe had no clear idea whether to accept this soft answer as a compliment or the reverse. After a few further doubtful sputterings it seemed best to him to reassert and strengthen a position which had won him, for what it might be worth, such meed of recognition from the opener of the debate: "Glad to hear," he ejaculated, "that Launceston does see the sense of what I say. Give him plenty more instances, if he likes, where animals show more reason than men. No animal ever gets drunk, gives himself heart disease by smoking too many cigarettes, doesn't throw lighted matches where they'll set a whole county on fire, doesn't brush a wisp of hair over his bald head, doesn't turn up his trousers in dry weather, doesn't sit up all night gambling, doesn't strut round a room to the sound of tin kettles banging and call it dancing—in fact, no animal makes a fool of himself."

"Thanks again, my dear Foljambe," said Launceston, with appreciation. "I agree with every word of your meaning, though the form in which you have put it—the two negatives—'no animal doesn't turn up his trousers,' etc.—would have got you into some trouble at Eton when we were there together. I would be almost ready to accept as definition of man—the mistake-making animal. Instinct makes plenty of mistakes"—("I don't believe it," came in a growl from Foljambe. "A very interesting treatise might be

written," retorted Launceston, "on the misleadings of instinct.")—"I was going to say," he resumed, as I made a note of this suggestion for a future paper after this parenthetical exchange of thrust and parry, "that instinct makes mistakes, but that reason makes a very great many more."

The talk ebbed and flowed. I did not trouble to take any more notes of it. "What is your view of it all?" I asked Pershore, who was in the arm-chair next my own. He was a doctor—doing a big practice in the Bloomsbury district. He generally came to our fortnightly meetings, but hardly ever spoke at them, saying, truly enough no doubt, that he was far too busy for talking.

"What I think of it," he said, taking a large meerschaum from his mouth, to answer me, "is that I want to hear more before I can come to an opinion. All this is mere scratching away at the surface of a big subject, and at a very little bit of the surface."

"We'll have more," I said, "if I can manage to get it out of Launceston."

"You can manage it, if anyone can," he replied, and I felt flattered, as a bear-ward might by a compliment on his tact in dealing with a fierce pet.

"By the bye," broke in Launceston, who had not been listening to the talk but had been sitting abstracted in his own thoughts since the Foljambe skirmish. "By the bye, I should just like to add, if you will let me, a postscript to what I was saying when I was interrupted by my friend Mr. Foljambe's genial criticism. You may ask me perhaps 'Why make all this pother and talk about all this?'

What does it matter whether there is such an affair as animal psychology or not, whether the human *psyche* is, or is not, an outgrowth of the lower animal's brain or mind ? '

" My answer is, that it really does matter quite enormously. If anything matters, this matters. The frame of man's soul, his body, it is certain that we must allow to have been developed from lower animal forms : we are obliged, since Darwin, to grant that. But are we driven to the same admission in regard to his *psyche* ? I affirm that we are not and I have given you, and hope to give you a few more, if you will bear with me, reasons for that affirmation. And I say again that, human nature being what it is, it matters enormously for our practical comfort of soul and also for our spiritual advance to be able to make that affirmation in confident faith—for this reason : I do not go so far as to say that if we ascribe, as my old enemy Sir James Macadam would have us ascribe, the mind and soul of man to a development out of the kind of intelligence that we see in the other animals—if we make this ascription, I do not say that it is impossible for us to believe that the human soul survives the body and has its spiritual communion and intercourse with influences which are not appreciable by our senses—I do not say it is impossible that we may so believe, but I do say that it is an ascription which places far more strain on our power of credence in the immortal and the transcendent quality of the soul than if we are able to regard that soul as something uniquely human, something that belongs to man and belongs to no

other one of the animals that has preceded him in the story of evolution—something, in fact, that was newly given when man came on the scene and which really makes man what he is, a spiritual being as well as a material being. It is as if the spiritual had been introduced as a new thing into a material frame which had been gradually built up through all the ages.

“I do not say that it is rational that this should make it easier for us to conceive of the soul of man as being in touch with forces and influences which transcend all that our senses tell us anything about : perhaps it is quite irrational ; but I repeat that, our human nature being so strangely composed as it is, in point of fact, it does make it easier for us, as human beings, to conceive it.

“I know it is the kind of position which Victorian science, as represented by Sir James Macadam, hates. It contains an assumption abominable to that science—the assumption, as I said before, that one and one make two. It was always the constant endeavour, I will almost say the frantic endeavour, of that Victorian science to add one and one and bring out the sum as one—to say that spirit and matter were one, not two, that the one was but a mode of the other, or some German jugglery of that sort. Above all, it found comfort in that blessed word ‘uniformity’ : it recognised no boundary between the living and the dead, it thought to bring life out of its dead rock, to bring spirit out of that inherited habit which is instinct.

“I’m not asking you to take what I say on my own credit. Most of the scientific people of to-day

will back me up in it, I think. That is what makes me so mad with old Macadam, that he talks as if he and his contemporaries had settled all about the heaven and the earth once and for all, and that no later knowledge was knowledge at all. I tried to get him to read a pamphlet which I have here"—he produced some pages from his tail pocket—"by Soddy of Aberdeen. It is an address he gave to the students there. But of course old Macadam wouldn't read it, or, if he did read it gave it back to me with a benevolent grin of contempt on his silly old face which was as much as to say that he had found it not worth the reading. But he's a great man, Soddy. What is it he says? Here we are: 'In passing from the phenomena of the inanimate world to those of life in general, we have to admit at least one fundamental conception which cannot be connected with the conceptions of the inanimate world, and which it now seems most unlikely ever will be.'"

"Knocking out Herr Plüger's synthetic protoplasm," Pershore commented.

"Knocking out everybody's synthetic protoplasm," Launceston amplified.

"What the devil's 'synthetic protoplasm'?" Foljambe asked wrathfully, as if the phrase gave him personal offence.

"This German gentleman," Launceston explained, smilingly, "thought he had invented life, living matter. I don't mean such splendid specimens of living matter as you, Foljambe, but living matter in its simplest form. It was a beautiful imitation; it had all the chemical constituents of

living protoplasm, showing all the streaming movements of living protoplasm—I am right, am I not, Pershore ? ” he inquired of the doctor, who confirmed him by a nod—“ the only one thing that the imitation lacked was life. Otherwise it was perfect. But it lacked life, and in consequence the streams ceased to flow, it ceased even to look like living protoplasm, for the simple reason that it was not. It was dead.

“ Soddy, you see, to go back to him, speaks of ‘ at least one fundamental conception which cannot be connected,’ etc. That is to say, he recognises one break, but is careful to guard himself against being supposed to assume that it is the only one. In fact, he goes on almost immediately to say, ‘ I make no pretence of discussing whether the personality, conscience, and soul of a man is, or is not, without any entirely new fundamental conception, capable of being regarded as the further development of the simple consciousness, or awareness, of its existence as a separate creature, possessed by the lowly organism. I accept the, to my mind, complete break of continuity between the animate and the inanimate worlds, as being all that is really demanded by our present knowledge.’

“ That is what Soddy tells his Aberdeen students. I should like to challenge him on the point of its ‘ awareness of its existence as a separate creature of the lowly organism.’ I do not for a single instant believe in that awareness. Soddy, however, explicitly says that it is a subject outside his special ken—not his job, in fact. What he is insistent about, and does claim to speak of with knowledge,

is just this uniformity ; and he chucks the blessed word overboard. He insists on at least one break. He emphasises it again a little further on : ' One's scientific sense of direction tells that the further one advances towards the ultimate insoluble problems of physics, the more completely one leaves behind the phenomena of life and all its mysteries.' And, just above : ' Though the road to the absolute truth stretches, as always, into a distance that may be approached but for ever recedes, we *know the direction*' (he italicises those words) ' that the road takes. This is the crux of the whole matter. Its direction is definitely away from and not towards the mysteries of life and spirit. The path hewn by knowledge through ignorance points two ways ' (two ways—do you see ?) ' in the direction of the absolute unattainable truth. Man has always tended to confound these two classes of the ultimately unknowable ' (Macadam persists in confounding them). ' Heaven is at once the abode of the constellations, which obey the laws of mechanism with undeviating precision, and where events and consequences are predicted before they occur to the fraction of a second, and also the abode of God and the heavenly host of disembodied spirits.' "

" A Theist, although a chemist," Tilden commented.

" A Theist, because a chemist," Launceston corrected.

" What the devil's a chemist got to do with it ? " Foljambe asked.

" A chemist," Launceston explained to him, as one might to a child of five, " does not only mean

a man who makes up medicine in a shop with jars of different coloured water in the window. It may mean that, but it may mean other things besides."

Foljambe muttered sounds like "a fellow ought to use words in their proper meaning," and grumbled off into silence.

"It's a curious view of world-making that this Soddy gives us in this paper," Launceston resumed. "He seems to look on it as if the Creator found Himself with something ready made for Him to work on—that is to say, matter and energy—and then, taking these as data, worked into them life and the human mind and the whole evolutionary coil. He does not explicitly say just that, but that is what it amounts to. Look here"—he read out passages: "'In modern science, matter and energy are the unchangeable realities that can neither be created nor destroyed.' Do you see that? Pretty strong, isn't it? Cannot 'be created nor destroyed.' He quite sees the difficulty of his theory: he faces it, for he says, towards the end of his paper, 'I do not expect to escape or shirk the question: Who, then, created all this wonderful and intricate machinery? Science answers that matter and energy cannot be created or destroyed. The universe is eternal. The very idea of creation and destruction is drawn, not from the inanimate universe, but from the phenomena of life. These ideas cannot be considered apart from life, whereas the inanimate universe can. Just as the man of science is unable to push his mechanical conceptions to explain life and the Deity, so the theist must not push his conception

of the Deity and life into the inanimate universe. The Rubicon that cannot be crossed in one direction, obviously must not be crossed in the other.' That's what Soddy says. He says that he does not shirk the question 'Who created it all?' Perhaps he doesn't, but do you think he solves it?"

"I don't see," said Pershore, "that he gains much by saying that energy and matter are eternal and what old Milton calls 'uncreate.' It is as impossible for us to conceive them created as it is impossible to conceive them uncreated. If we assume them to be made, we only come back on the weary old puzzle of the Maker, and who made the Maker? 'Great effluence of great essence uncreate' is just about as near to it as Soddy or anyone's likely to get, it seems to me, to convey an idea of the hub of our little system."

"Yes," Launceston agreed, "but you won't get any nearer to 'it,' as you call it, by trying to prove that one and one make one, when all the evidence goes to show that they make two. That's Soddy's point, mainly."

"Soddy, then," said Tilden, "regards matter and energy as the real things, the permanent things: all the rest are impermanent and unreal."

"Not at all, not at all, he's not such a fool as that," Launceston snapped out. "Didn't I tell you he's a theist?—Well, perhaps I didn't, but he is: at least I take him so. Look here: 'In modern science,' as I read to you just now, 'matter and energy are the unchangeable realities.' But in the very next passage he says: 'The doctrine of the immortality of the spirit or conservation of

personality may be regarded as the inverse form of the scientific argument above. The real part of a man is not his bodily organism, which is continually wasting away and being as continually renewed, nor the physical energy at its command, which is derived entirely from the inanimate world, but is the personality resident in the body and in control of it.' Again he says this—arguing that once life is introduced the course of evolution may be regarded as smooth travelling—he says : ' In man we get hopelessly beyond the range of physical science. . . . The mechanical and even the vital aspects have been thrust into the background by a developed personality that consistently acts and tries to act—and therefore in the language of science, already explained, is—a distinct being, resident in the body ' (these really are striking words, emphasising the duality), 'resident in the body as a man may live in a house, and, if real, then, by the canons of human thought, immortal. Thought, reasoning power, memory, free-will, the æsthetic perceptions of beauty and harmony, the ethical ideas of virtue, justice, duty, and self-sacrifice, and the spiritual aspirations of holiness and triumph over death, divide him from the simplest form of life.' You see, he is a theist—I remember now I did tell you he is a theist—*because* he is a chemist, not *although* ! ”

“ It's a strong statement, certainly, that of his about matter and energy being eternal and uncreated,” said Tilden. “ D'you think it means anything ? ”

“ What do *you* mean, by ' meaning anything ' ? ”

"I mean this—that I agree with you that as a rule when a man begins to talk to you about eternity and infinity and so on, you had far better not waste your time listening to him; he is sure to be talking nonsense; but Soddy is hardly the man to talk nonsense."

"No," said Launceston, who had been hunting in the pages of the paper which he had in his hand while Tilden was speaking. "He has a meaning in it. I was looking for the passage which seems to me to explain it. Here it is: 'A world without energy, in the present state of knowledge, implies a world without matter and, therefore, no world at all.'"

"Well," replied Tilden, "if you call that an explanation. Is the state of 'no-world' inconceivable?"

"Just as inconceivable, and just about as conceivable, as a world eternal and uncreated. After all, Tilden," Launceston concluded, with a sweet reasonableness that was rare with him, "I expect you are right, and we had better leave such words as eternity and infinity alone."

CHAPTER VII

THE CRITICS

A DAY or two after his reading of that paper on Animal Psychology, Launceston, meeting me in the Club, transfixed me with a cold grey eye of such a stony gleam that I knew trouble impended. Therefore I said with the more heartiness "Good-morning."

"It's an extraordinary thing," he said, responding not at all to my cheeriness and retaining me as a transfixed beetle under his arctic eye-gleam, "that since I read that paper the other night, to a small and private audience, I've had quite a number of letters about it from people I've never heard of and who are not members of the Club at all."

"Naturally," I replied, "a member of the Club would not write : he would speak to you about it."

"Confound you," he exclaimed. "You know devilish well what I mean. How did anybody outside the Club get to know anything about it? That's what I want to know."

"Oh, I daresay I can tell you that," I said, trying to speak with all my natural amiability, though I was quaking with hidden fear. "I took shorthand notes as you went along and had a few copies typed and gave them to one or two of the

members who wanted to read over what you had said. No doubt they will have shown them to a few outsiders. That's all there is to it."

"Oh! Dashed impertinent of you, I call it." He went away with a growl in his throat like an old bear, but in his heart I believe with a gentle sense of flattery—no man is more vain than your professed cynic—at so much attention paid him.

After application of further judicious compliment he consented to give us a continuation of former comments on another Thursday, and again I braved his growlings and took notes. I smiled with an inward glow of satisfaction and amusement when I found that he meant to take some of these much condemned letters as the basis of his talk.

"By some means which I have not been able to discover," Launceston began, "but which, nevertheless, I strongly suspect, something must have got abroad, beyond our own circle, of what I was saying the other day about the mind of the lower beasts. Consequently, I have received a variety of letters on the subject from people whom I never heard of before: I may add, in regard to most of them, people whom I hope never to hear of again."

I had not looked up during this exordium, but I felt that his grey eye was on me as the guilty thing of his suspicions.

"Most of the letters, of course, are quite beneath the worth of notice. Some are would-be funny, some are simply silly. Here is one which at least has the merit of quoting the opinion, or what purports to be the opinion, of an intelligent man. This commentator writes thus: 'I find nowhere

clear definitions of reason and instinct.' The comment," the debater admitted, "is quite just. I have not given him definitions. Where possible I avoid definitions. But, as members of the Club know, I have adumbrated to them the ideas for which I mean these two useful words to stand—reason as the faculty of looking ahead and making a mental picture, leading, on the practical side, to planning: instinct, the inherited habit.

"It is no use going to dictionaries for definitions, because they give you so many alternative ones that the lines of definition cross and cut one another up so that they cease to be lines or to define at all. But then he goes on, after this tolerable beginning, to deliver himself wholly into my hand—thus. He writes himself large and legibly as typical of the popular delusions. 'If he can so define,' he says, 'is he not, in making an abrupt cleavage between the two, running counter to what we are all coming to accept in modern thought?' Actually he can write that," Launceston exclaimed, throwing up his hands in an affectation of holy horror. "'Modern thought!' Surely it is Victorian thought, thought of the Macadamite age, that he should have said. He proceeds, then, introducing the respectable name that I have referred to, 'In old Oxford days my tutor, Ingram Bywater, in commenting on an essay which I had to write and read to him on the philosophic axiom "*Entia non sunt multiplicanda præter necessitatem*" instanced among its common breaches the popular distinction between instinct and reason.' 'In old Oxford days,'" Launceston repeated. "Very much so. It

is exactly what Ingram Bywater or another might very intelligently have said in those days. 'Those were early Darwinian times,' he goes on, and I forget his exact exposition: but he would undoubtedly say now that reason is developed instinct, and that there is no 'solution of continuity' between them, and that it is impossible to put down a finger and say 'this is reason,' and 'this is instinct.' But whence, I would ask," said Launceston, pausing yet again in his reading of the letter, "did my kind correspondent get this so useful 'undoubtedly'? How does he acquire this confidence that Mr. Bywater of the 'old Oxford days' would 'now' say such a thing as this? On what grounds does he impute to Mr. Bywater so static and non-progressive a mind as he implies? He does not tell us. 'Science,' my friend goes on, 'cannot yet prove, but is every day further from denying, the dictum that "every material atom contains a bit of mind-stuff."' "

"Now," said Launceston, "if I were in the position of the Mr. Bywater of the 'old Oxford days' and my correspondent were presenting me this remark for criticism in an essay, I should correct it courteously in this manner, rewriting it 'Science cannot yet prove, and is every day farther from endorsing, the dictum that'—etc. 'From that one germ,' he goes on, 'must develop in a progression without hiatus all the mental faculties, including such as introspection and reflection, which you deny to animals.' Whence, I will ask again, does the writer get his 'must'? Contrast a moment those words which I quoted on a former Thursday of

Professor Soddy, somewhat more modern than the excellent Bywater who was a don even in my own far-off 'old Oxford days': 'One's scientific sense of direction tells one that the further one advances towards the ultimate insoluble problems of physics, the more completely one leaves behind the phenomenon of life and all its mysteries. The advance in this direction has been from life and not towards it. . . . Its direction is definitely away from and not towards the mysteries of life and spirit. The path hewn by knowledge through ignorance points two ways in the direction of the absolute unattainable truth.' He also writes, in course of the same address delivered in 1919 to the Aberdeen University Christian Union: 'In passing from the phenomena of the inanimate world to those of life in general, we have to admit at least one fundamental conception which cannot be connected with the conceptions of the inanimate world, and which it now seems unlikely ever will be. . . . I accept the, to my mind, complete break of continuity between the animate and inanimate worlds.'

"I know," said Launceston, "that I have quoted these words in the Club before, and made quotations from the same source at greater length, but not in exactly this connection. At all events it is well that we should realise that we have moved on from those 'old Oxford days' and that the direction, as indicated by Soddy, is the opposite of that which the scientific people of that day expected. So far from there being no 'hiatus,' the hiatus compels itself to be realised. No doubt that classic dictum about the 'Entia' and the 'non multipli-

canda ' still stands as true as ever. They are not to be multiplied beyond the necessary number, but still there is no value or profit in applying the process of addition to any two of these ' entia ' and calling them one. ' The path points two ways,' says Soddy. ' Man has always tended to confound those two classes of the ultimately unknowable.' It is a confusion which was supreme in those ' old Oxford days.' It is due to the researches mainly of those who have pioneered into the mysteries of the radio-active elements that we are emerging from it, and the greatest of all the blessings of our escape from it is that it makes it easier for us to appreciate and realise the spiritual possibilities in man's nature. My unknown friend who writes to me concludes that by rejection of the theory of the mind germ in the material atom my ' position demands either the spontaneous generation in man of reason or its divine bestowal *ab extra*.' He conceives that he has me thus in a position of quite untenable difficulty ; and untenable it might have been for the pious disciple of those ' early Darwinian times.' In these latter days I find myself able to occupy it with great comfort. I would object only that the phrase ' spontaneous generation ' expresses little to me except a contradiction in terms. He offers me, in his final sentence, an alternative of which, likewise, I do not quite catch the meaning : ' Or do you hold that the other animals were marooned, mentally undeveloped, in *cul-de-sac* branches ? '

" So much for that. I have received other letters—I hardly know in what category to range

them. What, for instance, are we to make of this, which the writer says 'seems to me to be a good illustration of the limitations of canine intelligence'?

" 'A friend of mine in Edinburgh is the owner of a Scotch terrier which in its younger days developed the bad habit of stealing away every afternoon to its master's bedroom, there to lie on his bed. When this practice was discovered the dog was chastised, but instead of being broken of the habit it afterwards jumped down from the bed when it heard anyone approaching the door of the room. Its continued visits there, however, again aroused his master's suspicions. He discovered its deceit one day by accidentally putting his hand on the warm place on the bed where it had been, and gave it another beating. When he again came into the room the next afternoon he found the terrier once more on the bed, this time standing up and blowing vigorously on the part where it had just lain, to cool it. To establish a connexion between the original crime of being found on the bed and the apparent later one of leaving a tell-tale warmth behind it, and to arrive in consequence at the advisability of avoiding both, was evidently too complex a process for the dog's brain. I may add, however, that my friend was so touched by this almost pathetic instance of the inadequacy of canine reasoning powers that he forbore to punish the delinquent, and it has since enjoyed its daily siesta undisturbed.'

" I do not know what the Club will have to say as to that. Perhaps that what the friend in Edin-

burgh says is not evidence. I agree. Now here is a letter of which I like the military abruptness :

“ ‘ What about mules ? I had a pair in France which I drove all over the front, and I feel sure they reasoned when they were most unreasonable. Their acumen was almost uncanny at times ; often it was very exasperating, as when in some exciting moment you dropped your stick, and the rascals, seeing your misfortune (they were always watching you), and reckoning they were immune from corporal punishment, for a time at least, took advantage of the situation. But they showed their ability to reason in a more curious way. They were able to tell an enemy from an ally, and by an enemy I mean a Boche. Tom, the older mule, was an out-and-out Hun-hater, and whenever a German prisoner was loading my wagon I had to warn him to keep away from Tom or he would do damage. He used to watch out of the corner of his eye, and if an unsuspecting “ Jerry ” came within striking reach he got it good and hard from Tom’s iron-shod hoofs. He would even stop to kick at a convoy of prisoners who were marching past us on the road. Yet I never knew him lift a leg to a French or American soldier, though he had plenty of chances. His hatred of the Hun was well known in the section, and a standing joke with the drivers.

“ ‘ When we were at A—— a captured German horse was brought in. The mules would have kicked it to death if they had had their own way ; yet with French or English horses they were on ordinary terms.

“ ‘ Besides, did not Balaam’s ass, their great

ancestor, reason and get his own way? Clearly the days of miracles, so far as mules are concerned, are not yet past, but I think that most people who have had anything to do with the army mule will declare it to be like widows, according to the experience of the older Weller, "an exception to every rule."

"The last letter that I will bother you with is again from beyond the Tweed. The writer calls it 'a classical Scottish story of canine intelligence.' 'The incident,' he says, 'was reported some time after the middle of last century. I quote from memory. There was a feud between a cat and a jealous dog, a terrier, of course. One day the terrier chased the cat until pussy was literally up a tree. Then he ran to the house and quickly returned, dragging his master's gun, which he propped against the tree trunk. I forget whether he used his teeth or his fore-paw for pulling the trigger, but, anyhow, he shot the cat. This is a fine instance of animal reasoning, for the intelligent terrier must have noted previously the ease with which his master "threw up his gun and, without taking aim, brought down"—whatever got in the way!'

"The only question I should like to put to the narrator of this remarkable incident is whether or no the intelligent terrier loaded the gun for itself? If it did not do so, we are driven to the conclusion that the owner of the gun was guilty of the reprehensible carelessness of leaving it about loaded (and—query again—at full cock?) where the terrier was able to get hold of it. In whatever

light we may regard the intelligence of the terrier the acceptance of the latter alternative seems to imply great lack of intelligent foresight on its master's part.

"If you are good enough," he concluded, "to allow me to occupy a little more of your attention on another Thursday, I should like to explain myself further on the clear distinction which I conceive that we have to draw between the mind of man and of brute. I feel that I have left so much unsaid and unexplained. And I must ask you to forgive me—or perhaps I should rather say that I do not care whether you forgive me or not—if you find me sometimes repeating what I say to you. Our minds, even the best of them, are not like sensitive plates, which record every impression that comes to them: it would be a terribly bad job for them if they were; they would soon be overcharged. But there are certain points of importance which I wish to make good. I shall try to make good by reiteration, even at the risk of boring you. With that apology, if you are willing to accept it as an apology, I will proceed to bore you further."

I was delighted, and of course the Club agreed cordially. I was also secretly entertained. The bear from whom I had with difficulty been able to extract much more than a grunt was becoming enamoured of the eloquence of his own growlings. My tasks were beautifully lightened.

CHAPTER VIII

MAN—THE MISTAKE-MAKER

"MAN," said Launceston at the beginning of his further discussion on animal psychology, "might very well be defined as 'the mistake-making animal.' Homo is a mistake-maker because he is sapiens, and he is sapiens largely because of his mistakes:

"Lately, when you allowed me to make some previous remarks on this subject, I posed the common question, 'Do animals reason?' and gave it a decided negative. So doing, I was well aware that I was preparing for myself a bed of porcupines. Those fretful creatures, whose other name is critics, have been busy. What I did not expect, however, was that their number would be reinforced by any outside the small circle of our Club. It has so happened, however, by whose indiscretion I do not know" (as he made this wholly insincere affirmation of agnosticism he bent his eye upon me with the old baleful gleam), "that some account of that debate has passed beyond that proper boundary, and in consequence I have, as you know, been beset by quill-pricks from without the pale. The quills are sharp. I believed myself, however, to be well armoured, or thick-skinned—have it which way you will—and even now am not

feeling sore. But I knew, too, that I had an Achilles' heel, a joint in the armour, a tender spot ; and they have found it. So much, in the answer, must depend on the definition given of reason ! And I gave none ! We have to work within our limits ; and time is short and definition long. But these quill-pricks punctuate me with the necessity for some attempt at definition, and there is another term, besides reason, clamouring for definition—that is, instinct. Instinct, as I have said before, I take as being inherited habit, inherited, presumably, along lines of survival of the fittest, those who fail to acquire the useful habit dying out. I take it to be in no way akin to any other or more mysterious form of subconscious influence, such as some of the critics have suggested. As for those who hold that 'reason is developed instinct'—and more than one has used that phrase—I would not only 'say them nay,' but would submit that the very statement appears to me to involve a tacit confounding of two questions which should be, for lucidity, kept quite distinct. Question one : 'Do animals reason ?' Question two : 'Is Reason a developed form of instinct ?' I am prepared to be 'as damnably dogmatic as you please,' to quote classic words, in saying nay to the latter interrogative. The negative to the former may possibly depend on definition of a term. I will repeat a brief attempt at something like definition which I have made from this chair already.

"Reason, then, I take it, works from known to unknown. This, I maintain, those other animals

never do; they draw no new conclusion from known premises. When we who are men proceed to take action in accord with a conclusion formed in this way, we then begin to call the conclusion a 'plan,' and begin to devise means for carrying the plan into execution. It is this kind of work about which by far the greater part of our reasoning operations are busy. I maintain that no animal ever makes a plan, in this sense: and yet every animal is constantly acting in a way that looks, if we regard its action only superficially, as if it were just thus—i.e., in accord with plan—that it is acting. This planning, which the man does, implies a looking ahead with the mental vision, and forming a mental picture of some design which it is desired to achieve.

"The devil of it is," said Launceston, with a vigour of unparliamentary language rare in our polite assemblies, "that acts of animals, especially our domestic pets, are so confoundedly like what they would be if the creatures actually had formed a mental picture and worked to its fulfilment, that the temptation to us, in our human way of thinking, to regard them as if they were so inspired is almost irresistible. I will give an illustration from one of the letters which I have received. My correspondent writes:

" 'Do animals reason? What is reason? By what tests do we distinguish instinct from reason?

" 'May your question be posed thus:

" 'Have some animals the power of seeking to satisfy some want by more or less complex processes operating in and from the brain, such pro-

cesses being of a sequential character, thus implying the capacity to deduce causes from effects ?

“ ‘ If to possess such a power is to reason, then obviously animals do reason.

“ ‘ I bred a tom cat about thirteen years ago which is still alive. The cat’s food is always placed beneath a table in the scullery. To reach it the cat must pass through the kitchen door, and then through the scullery door.

“ ‘ A few months ago I was playing bridge in my study. The house was empty save for the four bridge players.

“ ‘ An agitation of the handle of the study door informed me that the cat wanted to come in. He always does that. I opened the door, but the cat, instead of entering the room, ran, with a little cry, to the kitchen door, which was shut. I opened the door ; the cat ran into the kitchen, and I returned to the game.

“ ‘ A few moments later the handle of my study door was again agitated. On opening the door there was the cat, which immediately, with the cry which meant that I was to follow, ran into the kitchen and stood gazing at the closed scullery door.

“ ‘ On the first occasion I had let the cat into the kitchen, but until the scullery door was open its food was inaccessible.

“ ‘ To this fact it called my attention in unmistakable fashion by actions which imply mental calculation as to the consequences which would follow from them.

“ ‘ This is not a “ cat story.” It is absolute fact,

which can be attested by all the parties, still alive, who were playing bridge with me that evening.

“ ‘ If my cat did not reason, what did it do ? ’

“ You see,” said Launceston, folding up the letter, “ that is a very good instance to the point that animals do, now and then, act so much as if they were rationally prompted, that we are very apt to fall into what I believe to be the error of supposing that they really are thus inspired. Since I hold this view, the writer of this letter is perfectly justified in asking me : ‘ If my cat did not reason, what did it do ? ’ To the best of my ability I will try to tell him.

“ I am perfectly ready to admit that if a human child were in the position of the cat—that is to say, shut off on the one side by a door from its supper, and, on the other side, by another door from a human adult who was capable of opening both doors, and so giving access to the supper—it would act just as the cat acted—i.e., would go and scrabble at the door behind which was its powerful friend, and then, having attracted his notice, would go to the other door, towards the desired supper. But in doing so the child would act according to a design foreseen : as we phrase it, he would ‘ say to himself,’ ‘ I will get the man to open the door,’ and would form a mental vision of the whole operation. It is just that mental vision of a prospective happening which inspires his actions : he is drawn forward by that prospect. My view of the cat’s similar act is that it, on the contrary, was always, at each stage in the process, being pushed along by a succession of acts, each suggested by the act

immediately preceding it and by the situation created by that act.

"I will attempt, after the fashion of the *juge d'instruction* of a French Criminal Court, to 'reconstruct' the cat's acts and motives. It is uneasy because it suffers hunger, owing to its time for supper having arrived, or because stirred to appetite by the smell of the banquet, or by the sound of its arrangement, in the scullery. It is not able to get to the supper because of the closed door, but it can hear, and probably also smell, its human friend behind another door. Experience, beginning in its kittenhood, has given it the habit of going to this friend in trouble ; so it scrabbles on the door which keeps it from him. He opens the door ; they are together. The first impulse, so obviously natural as to need no laboured explanation, of every creature when it wants a thing is to move towards that thing. The cat wants its supper, and would move towards it. But the door still intervenes. The intelligent human friend understands what it wants, and opens the door—the door into the kitchen, where he supposes the supper to be. As a matter of fact, the supper really is in the scullery, beyond yet another closed door. So the cat repeats its former acts ; its master has to leave his bridge again (the history discreetly does not tell us what the other players, under this double interruption, said about the cat during the master's absence). He opens the scullery door ; cat and supper are made one ; all is peace. Of course, the second call and the second door are incidental merely. What explains the kitchen door will explain the scullery

door equally. The double event does not deepen the mystery in any way.

“ Obviously, I cannot *prove* that all went, in the cat’s mind, as I think it did ; I cannot *prove* that it did not have a mental vision of the master coming at its call and opening the door to unite it to the saucer of its desire—I cannot prove that it did not ; but I do not believe that it did. And I am tolerably sure that no one can prove that the cat did have the mental vision. My case that it did not appears to me to be so fortified by innumerable evidences of what we may perhaps call a negative kind as to be very nearly unassailable. The lower animals are much more remarkable—if they have any of this power of design, of foreseeing, of reasoning from the known to the unknown—for the things that they do not do than for the things that they do. At every turn, in every incident, as it seems to me, of their lives they indicate that they have not this power, but that they are creatures which work by habit and in obedience to the impulse which each act, and the new situation created by it, arouses immediately, as it is done.

“ But they ‘ expect ’ you may say—‘ they look forward to the recurrence of what has happened before.’ Oh, yes, I give you that, but what makes all the difference is the fact that it is a ‘ recurrence ’ which they expect—the something that has happened before. They have memory, of a kind, in full measure, and very exact. But it is the distinguishing mark of the human mind to look forward to that which has never happened before—to a conclusion made up by its inferences from what

has already happened, from its premises, from its experience. And it is just in this, in the habit of obedience to the guidance of what has happened before—and not only to that which has happened to itself, the individual creature, but also to its ancestors in the millionth degree—that the other creatures surpass man, that instinct transcends reason. And by what appears to me a very strange confusion of thought, it is out of this very fact that instinct inspires such wonderful acts, far transcending all the designing wisdom of the reason, that some argue for the development of reason out of instinct!

“Suppose for a moment that it were so, and suppose a long-tailed tit or a solitary wasp to be given reason in place of its instinct; could reason instruct the one to build its architectural marvel of a nest, or the other to store grubs in a tunnelled cell for a larval progeny which it has never seen? Instinct gives guidance infinitely superior to all that reason could ever furnish for these activities essential to the species’ life; but is that any argument that reason is instinct developed to a high degree? A five-pound note, we are told, is better than a smack in the eye, but it does not of necessity follow that a smack in the eye is a highly developed form of a five-pound note. The reasoning that affirms the one might as well, it seems to me, affirm the other. That is all that I can say now—it is all that I have time to say. That is the pity of it. It is a terribly cramped arena in which to do battle with the myriad and myriad-quilled porcupines. If only I had a little more space to cut and thrust! But on

this particular point, enough ! I want to say a word now about the mistakes of instinct.

“ It may seem strange, if instinct is inherited habit, that mistakes can possibly arise. One might think that a habit which a species has been learning all through the ages must be a good one—that its faithful following must always be for the advantage of an animal which it has successfully guided all this while in the course of evolution : yet let us see again, in the light of object lessons which lie close to our hand and clear to our eyes, how the facts really stand.

“ In those pleasant diaries of a field naturalist which Sir Herbert Maxwell calls ‘ Memories of the Month,’ you will find it written : ‘ Still more extraordinary was the behaviour of the blue tit-mouse, as described by Mr. W. Farrer. The female was sitting hard upon her eggs ; her mate brought her so many caterpillars that she could eat no more, and refused to take any ; whereupon he directed his attention to a brood of young hedge-sparrows in a nest a few yards distant from his own establishment, and Mr. Farrer succeeded in photographing him in the act of feeding the nestlings of a species so little akin to his own as *Accentor Modularis*. The Good Samaritan himself,’ Sir Herbert adds, ‘ did not take a more liberal view of the question—Who is my neighbour ? ’

“ Thus comments Sir Herbert ; but, of course, he knows—no one better—that it is with no idea of helping another—nor even of charity to its own babes—or of ‘ playing the Good Samaritan,’ as he says, that the tit-mouse so acted. Such an idea

implies a mental conception quite impossible for the mentality of such a creature. What it was doing was simply gratifying its personal instinct to collect caterpillars and stuff them down somebody's gaping throat—his mate's for choice, but, failing her gullet, then some other. Thus, too, the cuckoo's foster parents.

“ Thus, too, those ant communities which cherish in their midst the beetles of the *Lomechusa* clan which prey on the very ants, or on their larvæ. Yet the ants nurse and clean and shift these beetle larvæ with identically the same care as they give to their own. And here we see how wonderfully Providence has contrived all things for the best—or, if you like it better, how wonderfully evolution has worked out its problems. To me it seems to matter not at all which you say, so long as you realise that it is by the way of evolution that Providence has decreed that the world shall go. These *Lomechusæ* breed so fast and are so carnivorous that if the ants let them alone they would quickly eat the ants out of house and home and very existence ; but this care which the ants bestow on their larvæ, in common with their own, though exactly suited to the ant larvæ, in the changes of temperature and of moisture into which they bring them, is absolutely fatal to all but a very small percentage of the beetle babies. Thus a fair balance is struck. If the ants had even a feeble glimmer of intelligence to enable them to realise the *Lomechusæ* as their enemies, and therefore to deny them their nursing care, then they would infallibly so allow the number of their foes to increase as to eat them to their deaths.

Fortunately for their own survival they are so little respecters of persons that they do for their deadliest enemies as for their own most cherished babes, and slay their thousands by this misdirected motherly care.

“The observations of a very famous French field-naturalist have recently been made more easy for an English reader by translation into his own tongue. These are the ‘*Souvenirs Entomologiques*’ of M. Fabre, of which a portion is given into our hands in one large and well-illustrated volume, with the title of *The Wonders of Instincts*. It is a good title, for the instinctive operations which it reveals to us are truly most wonderful. We marvel—we can never cease to marvel—at the inspiration which moves the solitary wasp to store the cell made for its young with just such food as will best suit that babe which is yet unborn and which the parent will never see. We are filled with admiration of the secret motive which leads the grub of the Great Capricorn, after many months of boring in the heart of the hard tree-trunk, to bite its way, just before undergoing the change into the pupal form, almost to the very outside of the stem, so that only a thin rind shall be left for piercing by the perfect insect after the last metamorphosis. In its final perfection it has none of the great timber-cleaving jaws of the grub : but how was the grub to know this ; who taught him ? Surely none but He who ‘ binds the sweet influence of the Pleiades and looses the bands of Orion.’ Such foreknowledge is very far beyond the scope of any such faculty as our human reason. And yet, after a

while of wondering out these seeming miracles which instinct prompts, we find ourselves, as we read M. Fabre's pages, again and again amazed at the idiotic acts, as our human reason would pronounce them, to which this same instinct moves the creatures. There is one of the spiders which, so soon as she has laid her eggs and collected them into a ball of web, attaches the ball to her own hinder parts, and so travels about with it. From time to time she elevates it into the sunlight so that the eggs shall have the favour of the incubating warmth of the sun. M. Fabre, experimenting, found that the spider was not the least particular whether it were her own ball of eggs or another's which she thus attached to herself. Further, he found her to be equally content with a ball of cork, or of rolled-up silk, as with a ball of eggs, and that she would sun this barren bale of stuff exactly as if it were a pregnant sack of eggs. The evidence is simple—that so long as she could gratify the instinctive craving for the sensation of a bag or ball of something attached to her, she was well satisfied.

“The psychological value of M. Fabre's work and testimony is great, quite apart from its passing interest for him who runs as he reads. Once for all he must surely have exploded the myth that instinct is reason in little, or that reason grows out of instinct. Quite obviously they are plants of a different species. He quotes Lacordaire, in his *Introduction to Entomology*, referring to the burying beetles as a glaring instance of an advocate of the reason-ex-instinct myth: “The following case,” he (that is, Lacordaire) continues, “recorded by

Gledditsch, has also every indication of the intervention of reason. One of his friends, wishing to desiccate a frog, placed it on the top of a stick thrust into the ground, in order to make sure that the Necrophori (burying beetles) should not come and carry it off. But this precaution was of no effect; the insects, being unable to reach the frog, dug under the stick and, having caused it to fall, buried it as well as the body." Lacordaire cites this as an instance of reason, the beetles deliberately working under the stick's base in order to ensure its fall. M. Fabre, by probing the stick obliquely into the ground and hanging a mole so that it was suspended clear of the stick, proved that the beetles would always dig directly under the carrion. Thus digging, they would inevitably loosen the base of an upright stick by which it was supported, but they never disturbed at all the earth around the base of an inclined support. They dug, because the presence of carrion stirred their inherited habit of digging when such prompting was at hand; but their digging when the stick was inclined was all in vain. They never dug near the point at which the stick went into the ground, so that the carrion never fell into the grave. They dug as instinct, not as reason, would have prompted them, and instinct, in this instance, misprompted them. It did not achieve the purpose for which the habit of the species was formed.

"But the interest, as I take it, of the psychology of the other animals mainly consists for us, who are human, in the light that it throws on our own psychology, on the beginnings of our own mental

powers, such as they are. No one will doubt that we see in the other animals the early stages of much of the mentality which man, the heir of all the terrestrial ages, has developed. The question is whether we see in them the early stages of all man's later developed mental powers. That is only another way of stating the question whether animals reason, using that word in the sense of arguing from known to unknown, of drawing new conclusions from premises known through experience, of forming a plan and working up to it.

"But there are others also, not of the lower animals, to whom we look expectant that they may show us some of the early stages of the mentality out of which our own august powers have grown. Those are the babies of our own kind. We can hardly be so foolish as to overlook their value as our teachers in this difficult and interesting affair. It is rather a terrible thing to have to realise, as we regard them, red and puckered and grimacing, that we all were babies once, but the humiliation has to be faced. I write merely as a man : mothers regard their features differently. Yet Fortune, who is herself a mother of some irony and some humour, has so decreed that I should act as consultant on matters of hygiene to a hospital for babies, and the privilege of the acquaintance of its inmates is perhaps the sufficient emolument attaching to the post. It is a privilege not to be despised. One thing that I have learnt is how astonishingly soon a baby is capable of being led into the way of vice, and how quickly the vicious tendency may be corrected and the babe brought back to virtue's

path. When I say 'astonishingly,' I write, again, as a man : mothers should know it, but it appears that all do not. For here was a babe, and it was brought into hospital, and it cried, and cried, far more than the babe of any rational parents had justification for crying over the dubious aspect of life, or than the ill for which it had been brought in gave cause. It cried, merely because it wanted its bottle, which is a perfectly right and proper thing for a babe to do when it is due time for it to have its bottle ; but this baby cried out of season, as well as in season. And why did it do this ? For the very simple and very wrong reason that its mother, knowing no better, had always given it its bottle, to quiet it, when it so cried. Whence it had fallen into the vicious habit ; and a crying baby in a hospital ward is as much worse than a crying baby in its home nursery as a singing canary in an aviary is worse than a singing canary in a solitary cage ; it excites all the rest to emulation. Physically, moreover, as well as morally, it is ill for the babe to have the bottle out of season. Therefore, in the hospital, the wisdom of the professional baby-breaker intervenes.

"As there are manuals on dog-breaking, so, it seems to me, should there, of at least equal necessity, be manuals on baby-breaking. Perhaps there are. The baby-breaker, then, refuses the baby the solace of the bottle thus unreasonably demanded, and turns an ear, which she may well wish deaf than it is, to the voice of its complaining. Perhaps she seconds this negative form of lesson with something more positive in the way of chiding, such as

is mutually understood between them. At all events the result is this : that in a very few days—days only, not weeks—that baby has unlearned its vice ; it takes its bottle at stated intervals, as all virtuous babies do ; it cries no more than all virtuous babies should.

“ This is a true story, although its moral is so beautiful ; and its hero was only four months old ! Now, supposing the same thing had happened with a puppy, and it is a drama that could just as well be enacted with a puppy in the hero’s (or is it villain’s ?) rôle, would not every advocate of the reason-developed-out-of-instinct theory have exclaimed in that event : ‘ See here ! Is not this a most striking exhibition of reasoning power ? Did not the puppy foresee that under its earlier dispensation it would get its bottle if it squalled, and equally did it not foresee, in the more Spartan consulship of the matron of the hospital, that no bottle came as the natural sequence of squalls ? ’ That, I believe, is the question that would probably have been asked had a puppy been the squaller. Seeing that it was a baby, and of four months only, I suppose that it hardly will suggest itself. Such a suggestion would seem absurd. Yet why absurd in the one case rather than the other ? It is true that a four-months-old baby is younger, in sense and experience, than any puppy, save for the fact that it is not born absolutely blind. That seven to one ratio in which we commonly measure the relative years of man and dog does not begin to be at all accurate until the man is of age. I think we may state it so. The dog of three is just about in the

same pride of youthful life as the lad of seven times those three years, and so too, onward, until the last, lean-and-slippered-pantaloon stage : the man of seventy-seven is aged just equally with the eleven-year-old dog. But in their respective infancies the ratio does not hold : the dog of two is far nearer the prime of canine powers than the boy of fourteen to the human prime : the dog of one year is an ancient of wisdom and experience as compared with the child of seven.

“ Nevertheless, by the time that the human child has arrived at that first seven-year stage, it is quite obvious that some wonderful event has occurred to it, some wonderful gift has been acquired by it, or has grown up in it, a gift such as the one-year-old puppy will never receive even if it should live to the age of a very canine Methuselah. The child has begun to form mental pictures, on ahead of its immediate experiences : which is just as much as to say that it has begun to enter on its heritage of humanity which shall distinguish it brightly from even the wisest of the canine folk. Together with this power of looking ahead and of forming a plan, it has developed a dawning consciousness of self as distinguished from not-self : it has begun to have a personality. I think—but I put this forward only as a matter of private judgment—that it has begun therewith to enter on the possession of an immortal soul. That is perhaps a look too long ahead, at this moment : its vistas reach very far. But with the acquirement of that forward-looking, plan-making faculty which we call, in a word, reason, we see

the child lose the grip of many of those instinct-given faculties and habits which the puppy will retain so long as life be in it. Very soon the most childish piece of humanity will be able to laugh at the wisest dog in all the world when the dog is seen using its fore-paws and its muzzle in the vain futility of covering over with earth, in the corner of the dining-room, a bit of biscuit which it does not require for its present needs. Its ancestors, who did not live in dining-rooms, nor on biscuits, formed the habit for it in days when it was a habit that had a value. The dog faithfully repeats all the motions of the burying now, though there is not a muzzle-load of friable earth wherewith to perform the interment. The child is perfectly capable of playing a similar game—of hiding where there is no cover nor camouflage wherewith to hide—but this play is done in the full knowledge that it is a game, that it is ‘pretending.’ Therein lies all the difference.

“Whether or no we ever do find in animals below man a gleam of humour is another question, and an interesting question, too. Again, as a matter of private judgment, I may state my own opinion that they do show us something of the kind. But in this affair of the hiding of a superfluous edible commodity there can be no doubt whatever that the dog is working in grim seriousness of purpose. There is no joke at all about it. It is done with all the solemnity befitting an ancestral rite : which, in some sort, it is. And just because it is for ever, to the last day of its life, under the guidance of this instinct—always the creature of the inherited

habit, with a thin veneer of acquired experience overlaid—therefore the puppy may be relied upon, unless rabies or the like catastrophe perturb all its machinery, never to ‘run off the rails,’ as the child, with its rational look-ahead, is nearly sure to run at one or other crisis of its human fate. Or, shift the metaphor a little, and say : the instinct-driven creature is like the tram-car travelling strictly on the lines laid down ; the rational being the motor-car with its freedom to go as the driver, reason, steers it—now and again to dire disaster.

“ That is the difference : the lower creature will always keep in the rut cleft for it by its age-long habit ; the man will leave the rut. Sometimes, as I have tried to show, the rut leads the lower creature to acts which reason would show it to be foolish—foolish because they do not achieve the purpose to fulfil which the rut and the habit were made. But reason gives the human animal an entirely new kind of freedom, freedom to follow plans which often in the words of Burns ‘gang aley,’ which indeed are just now fearfully ‘ganging aley,’ as the present condition of the poor world very forcibly shows us. The mistakes of instinct are not as one in ten thousand to those which are committed under the misguiding of reason. And yet, and yet, reason, in spite of its myriad mistakes, is, on balance, an agent so infinitely more helpful to progress than instinct that man, the one rational terrestrial creature, is king of the earth—the rest, his not yet wholly submissive (for the microbe is still his very formidable enemy) but in general tolerably subject people.

“Instinct, therefore, I repeat, as I said at the start, makes her mistakes, but reason makes a million more, and of the many definitions of man which we have heard none, as I think, fits him so closely or so significantly as that which I suggested as the heading of this debate—‘The Mistake-making Animal.’ And not only is man readier to make mistakes, he is a great deal readier at profiting by them, at learning by experience. The others learn, but very slowly, and often by the death of innumerable learners until only those that have avoided the mistake survive to carry on a race which has thus formed the habit of avoiding that particular mistake. This is a way of learning, but it is not to be called a mental way. Man, with his different mentality, realises the result of his mistake, and thence learns avoidance of it less painfully than these others—and yet (curious reflection!), of all the animals, man is pre-eminently the one that suffers pain. I am almost tempted to try another definition of him as ‘The Pain-bearing Animal.’ The others, relatively, suffer hardly any pain at all.”

“What the deuce!” exclaimed Foljambe. “When my dog runs in and I give him a dashed good thrashing for it, d’you mean to say I don’t make him suffer pain? Never heard such nonsense in my life!”

The amused smile that Launceston seemed to keep especially for Foljambe came to his face. “Right again,” he said. “Your criticism is always right. The domestic animals are an exception. When they fall into the hands of a cruel brute——”

"I'm not a cruel brute. You must thrash a dog when he runs in."

"So that he learns, you helping him, by his mistake. Quite right. I didn't mean the 'cruel brute' personally. But animals in the natural state suffer hardly at all."

"Not suffer!" Davis echoed. "How about 'Nature red in tooth and claw'? How can you say that animals in the natural state do not suffer?"

"'Hardly at all' were my words," said Launceston. "As for 'Nature red in tooth and claw' it's a detestable phrase, utterly misleading, a sheer travesty of the fact. Oh, but it's a long story, the story of the world's pain—too long a story to begin now, at this hour."

"Give it to us another night, for our next debate," I suggested.

"I might, if you could bear with it. It's part of the great story, the human story—a big chapter—but would not some other—Persnore, for instance—a doctor should know about pain."

"But should not talk about it," Persnore said. "A doctor's job is to cure it."

"Put them out of their misery—eh? But tell us—here we are all among friends—what is the way of doctors? Do you not, if you see a poor fellow dying, hopelessly gone, and in great suffering, do you not now and then, mercifully, give him a help, a little extra squeeze of the morphia tube?"

"Once, only once, I did it," Persnore admitted.

"Tell us about it," said more than one.

"The poor man was in agonies—it was not a

war case—a civilian of middle age. I judged he could not last twenty-four hours, and he was in fearful pain, his poor wife distracted. He was gone beyond all hope of science. I gave him perhaps twice the dose that would have done for a man in normal health—the only time I ever did it.”

We looked at him—I, at least—with a slight sense of awe. It was something of an experience to feel that one was talking to a man, one’s own friend, who could confess to have taken another’s life, even in circumstances which seemed to warrant it so perfectly.

“But, man,” came the deep voice of Sir James Macadam, “how could you justify it to yourself, to your conscience? How could you feel when you came to signing the certificate?”

“Certificate, Sir James!” said Pershore, as if astonished at the question.

“Certificate of death. I suppose as the doctor in attendance——?”

“Death!” Pershore repeated, with the same air as before—“what death?”

“The death of that poor man!”

“Death! He didn’t die. The next morning I went round, to make my condolences with the widow, and she met me with the first smile I had seen on her face for days. ‘He’s better, doctor,’ she said. ‘I’m sure he’s better. It’s that medicine you gave him last night.’ And better he was: from that moment he never looked back. I’d given him enough, as I say, to finish a man in any normal state, but his state was quite abnormal,

and I suppose it gave him just the help he wanted. Death! Why, that man's alive and well now. I got more credit by his case than any other I ever attended. He'll dance at my funeral, that man, yet."

I do not know to this day whether Pershore's story was a true one, or whether he invented it for our edification and perplexing.

CHAPTER IX

"THERE MUST BE PAIN"

"You may be surprised to hear it," said Launceston, opening to his debate, "but I have a friend, in the Anglican Church, with whom I often discuss our own and others' difficulties. The results are interesting, and often startling. I think he, no less than I, was startled to find how large a place the problem of pain fills in the perplexities of many vexed souls. He was driven to the conclusion that it was almost the principal impediment, for many, to belief in a God of goodness and mercy.

"We all know that from the very beginning of speculation about the nature of the Creator and of His creation this has been among the big obstacles. A hundred books have been devoted to the attempt to explain what Hinton, the writer of one of the best known of them, calls 'the Mystery of Pain.' Their conclusion has been to leave it very much as they found it—a mystery still.

"The Reverend J. T. Hardy, who has devoted lucid and penetrating thought to it, makes a gallant effort to outflank the difficulty of the position altogether by denying that any difficulty exists. His contention is, in fine, that suffering is so valuable an influence for moral improvement and spiritual insight that it is not an evil, but a good. Surely we have to limit that statement to the assertion that it is a relative, not an absolute good. No man

with the toothache can be expected to endorse the latter view, any more than he will share the opinion of Mrs. Eddy that pain is mere illusion. Suffering, from Mr. Hardy's standpoint, is at once a moral good and a physical evil: we find no trouble in sharing that standpoint with him. We might almost say that it is a necessary evil, human nature being what it is—resembling punishment, without which the morals of man would be even less respectable than they are. It remains, absolutely, an evil still, nevertheless, and the denial of this leads Mr. Hardy into an impasse when he comes up against the consideration of the suffering of the creatures, that have no morals to improve, below man in the scale. Dr. Strong, in his *Manual of Theology*, p. 226, puts the clear truth of the case with brevity and precision, writing: 'Pain is an evil, though it does good.' Professor Eucken also has arguments which finally dispose of the fallacy that pain may be regarded as other than an evil—be it but a necessary evil. I was not, neither was my Anglican friend, astonished that those he talked to and tried to help should deem the pain of the world mysterious: our surprise was only in finding that, for so many of them, it was one of the chief of their difficulties. He expressly said that it was one of the difficulties which a majority of his spiritual patients put in the first place. That did seem a little surprising.

"Now he had, or deemed that he had, a tolerably adequate reply and solution to suggest to them up to a point. Its weakness was that on arrival at that point—exactly the point of Mr.

Hardy's impasse—it broke down absolutely. He would urge the orthodox view that pain was the penalty of sin. In consequence of man's sin, pain entered the world. (I am not, for the moment, discussing this view—I name it only as one that an orthodox Churchman might advance.) He would carry that argument a step further, to a stage where a large number of us may be ready to follow him, and would urge the value of the discipline of pain in the development of man's moral nature, of his endurance, patience, sympathy, and so forth.

“ Thus far he could win, in most cases, the concurrence, more or less complete, of his hearer ; but then the vexed soul would be at liberty to enter an objection which he found himself very much at a loss to counter. ‘ All that you say,’ the objector would reply, ‘ may be very well as far as it goes. It may be all very well as an account of human pain. But you will hardly argue that the animals other than man are to be improved in their morals through suffering. That rather disposes of your second contention. And as for your first, which is distinctly more difficult for us to concede to you, it gives no explanation at all of all the suffering that there was in the world before man came into it. The pain of the countless animals that lived, that suffered, and that died before man appeared can hardly have been the consequence of the human sin that was not yet perpetrated. What have you to say to that ? ’

“ As a matter of fact, he found himself with mighty little to say. He found himself brought up against something very like a blank wall.

"There is, to be sure, a line of thought that you will find traced by certain theologians which claims to give an explanation of pain before man's coming. It is the argument that there was already sin in the universe though man had not arrived to commit it, because the revolting angels, Satan and all his crew, had long ago sinned, and so brought penalties upon the earth.

"That may conceivably be a sufficient explanation of it all for those who are able to accept and to assimilate it. It is, however, an explanation which will scarcely commend itself largely to modern thought. It is Miltonic rather than scriptural, and to most of us this idea of God's infliction of pain on the lowly and unreasoning animals dwelling on this earth because certain beings in the spiritual plane had disobeyed His commands, is incompatible with assigning to Him attributes of what we are at all able to understand as mercy and justice. It is equivalent, in fact, to making our God less, instead of more, good than ourselves—an idea repugnant even to one who was so little of a theist as John Stuart Mill. But, indeed, the whole argument is as if one should suppose that it accorded with any intelligible notion of even human, much less of divine equity that a London sparrow should be caught and tortured by a cat because the man in the moon or the inhabitants of Mars had misbehaved themselves. It is very difficult to treat the idea as at all worthy of serious discussion: difficult not to write it off as simply superstitious. It is scarcely less difficult, however, to dismiss it with such a label tacked to it, seeing that it is seriously debated and even, as it

seems, in some sort accepted by a theologian of such repute as Dr. Strong. 'Moral evil,' he writes in that *Manual of Theology* which I have already cited, 'is prior both in time and in importance to physical evil. In time, for the sin of Satan is prior to the existence of the physical world ; in importance, for physical evil is, we believe, one of the results of moral disorder.' In spite of Dr. Strong's authority we can hardly deem this a theory worthy of serious discussion, and had Milton never written *Paradise Lost* it is scarcely to be believed that we should hear of it to-day.

"The comfort that I am able to take to myself and that I try to impart to other people is that the mass and intensity of the suffering of the lower creatures is very much less than they are usually supposed. Descartes, as I have already said, wrote a book of which one of the main contentions was that the animals below man were pure automata and had no feeling at all. Huxley does this book the high honour of devoting one of his 'Essays' to it, and, although far from agreeing with the thesis which I speak of, certainly treats it with a surprising measure of respect.

"The gist of his criticism is tolerably summed up in these words from his Essay entitled *Animal Automatism* : 'Though we may see reason to disagree with Descartes' hypothesis that brutes are unconscious machines, it does not follow that he is wrong in regarding them as automata. They may be more or less conscious, sensitive, automata : and the view that they are such conscious machines is that which is implicitly, or explicitly, adopted

by most persons. When we speak of the actions of the lower animals being guided by instinct and not by reason, what we really mean is that, though they feel as we do, yet their actions are the result of their physical organisation.'

"That is to say that while they act mechanically they are, still, conscious of sensation. So be it. I am content to range myself with Huxley's 'most persons' of the above passage, but if there is one of the many quotations made tedious by a thousand repetitions which I especially abhor, it is that about 'Nature red in tooth and claw.' It is abominable to me in part because it is so true, but far more because it is so false. I hate it alike for its literal truth and also for its spiritual lie. How true it is in letter perhaps we who use it do not commonly appreciate: the killing and rending really are beyond all conception; but as for its spiritual implication—of Nature's cruelty in so rending and killing—that is not merely false but rankly blasphemous.

"First, then, in respect to that literal sense in which it is so very true, in what measure do we realise it? We know indeed that there is fierce killing by the carnivores from the lion springing on the antelope in the forest to the cat pouncing on its mouse in the kitchen; we know that the swallow subsists on insect life, and that many insect kinds prey on one another. But, on the other hand, the majority of the creatures which we see most often do not exist at the direct expense of others. Most of our domestic animals are herbivorous, and not one of the cattle on a thousand

hills is an intentional killer. But if we leave considering the life on earth for a moment and think of the teeming life in the waters the scene becomes almost unbearably appalling to eyes disposed to regard death as king of terrors. In those depths, or indeed on those surfaces, of the killing there is no end. Some few live either wholly or in part on the algæ and low forms of plant, but the very vast majority in numbers that defeat computation, or even conception, are occupied in a ceaseless devouring one of another. If there be one thing more astonishing than the death-rate of marine creatures it is surely their birth-rate. The multitude of the eggs laid by the females of certain of the fishes, for instance, is only credible because we have the best authority for its correct calculation. The one is really the condition of the other : unless the sea were to become intolerably full, such birth-rate is only possible on condition that a very small or even infinitesimal proportion of the born shall come to maturity ; the intense marine population is only possible on the condition that there shall be this amazing production of the lives by whose deaths it lives. Nature's tooth is indeed murderous and red. The earth, and yet more the sea, reeks of its shed blood.

“ The informing spirit of that abominable quotation, however, is not the celebration of these violent deaths—deaths to sustain lives—but a direct and, as I maintain, quite false and impious impeachment of Nature, and so, mediately, of Nature's God, on the ground that life, thus taking life, is cruel, that the terrestrial story is a tragedy. Tragedy we

may confess it to be if death is tragedy, but that is ever an unsolved problem. We do not know enough of death, nor, perhaps, of life—certainly not enough of their relative value—to be sure about it. But pain is tragedy : it is tragedy's very soul ; we can have no doubt of that. The question then is, in what relation to pain does Nature's rending and killing, her ensanguined tooth and claw, stand ?

"To state the query is almost to find its answer. These deaths that Nature deals are ninety-nine times out of a century as merciful as the lethal chamber. In the first place we must realise, and happily are compelled to realise, that we cannot gauge the suffering of lower animals, even of our own warmth of blood, by our own pain under the same physical injury. Savage man suffers less than civilised man, the lower mammal less than the higher, the reptile, fish, insect, plant, less and less again until we come to absolute insensitiveness. It would be too long here to range the various argument, whether we take evidence from the gay activity and appetite of mutilated creatures, or from the decentralisation of the nervous system, which leads to this comforting conviction. Enough that we are able to rely on it without any fear that it is by reason of its comfort that we accept it and have faith in it. It has a firm base on solid, rational ground. The pain in their violent deaths which the lower things seem to suffer has little reality except in the conception of the thinking man whose thought is yet so limited that he must judge of their feeling by his—a widely fallacious standard. And these deaths are com-

monly as swift and sudden as they are violent. The olive dun comes floating tranquilly down the placid stream, a trout opens his mouth and sucks, and in a moment that dun has become trout : a thing of a torpedo's energy rushes through the stream, with immense toothed jaws, and the next moment that trout is pike. So it goes. Most of Nature's deaths are so swift that you cannot say ' Going ! ' before the life is ' Gone ! ' Neither Dr. Guillotine nor the electrocutists have devised exits more speedy.

"But compare, from another aspect, their victims and those of this red-toothed Nature, and see how things stand between them. The man in the tumbril or on passage to the chair suffers a thousand deaths, and, worse than death, of fear, of misery, of shame, or whatsoever be the hideous procession of the emotions. Till our own day comes for hanging we shall not perfectly know them, but we may suppose them disagreeable. And mark you this—many a man has committed suicide because of this fear of death—a logical absurdity as well as a moral crime—has sought death and gone to it because of his very fear of death, so much more grievous is the apprehension than the apprehended thing. And for one man who has committed the act, who shall say how many have been tempted to it ? How many, that is, of mankind. To the animal lower than man comes death, but not that far worse thing, its apprehension. The unimagina-tive beast, fish, and insect feel none of this. They are gay and life-ful, unconsciously enjoying, and the next moment they cease to be. That is all.

Yet, so far, this argument is but negative : we are showing only that Nature does not cause pain, though she cause death. We may say far more, and positively ; it is her rôle to cause pain to cease. The wounded beast or fish suffers, no doubt, though it is suffering far less than man would suffer if he had the like wound ; but such as the suffering is, Nature quickly steps in to stay it. If an animal be wounded in the herd, one of the great felines falls upon it, and its pain is ended ; for the wounded bird there is the hawk ; for the fish which wobbles as he swims, that wobble shows up the flash of his light-coloured underparts and attracts the pike or other fish of prey. None linger, because their injury is the opportunity of some other who lives by their death.

" That is Nature's plan, red-toothed to be merciful. She is thus merciful in a positive active sense, but these more active mercies are the exception just because the wounded animal is the exception and the rule the quick death, sudden, unlooked-for, unfeared, of the creature in full life. That is what life, as we know it, terrestrial life, has always been until man, the creature with creative reason, came upon the stage and wrought strange change in the drama. Apart from man, who has his anguish of the imagination, his torturing apprehensions and, thereto, his faculty for prolonging lives of pain and sickness, the ideal which Nature, unreasoning and red-toothed, has of life is this—a vivid, happy experience wrought to highest pitch, then the sudden death, the end coming in mid-course. The death of senility is the fate of few of Nature's children : the tooth and claw do their executioner's

work too swiftly for that lingering to happen often. Winter cold, doubtless, is the executioner of many, but his is a very kindly lethal hand, for before death come languor and torpor: the passage is from one to another form of absence of sensation. The conclusion of the reasoned matter is that Nature, kind as a mother, and a begetter of life, is kind, no less, in her endings of those lives which she began. We may note exceptions, possibly apparent rather than real, the cat playing with its mouse, the rabbit paralysed with terror faltering along before the stoat. What the emotions of these victims may be we do not know, but we are obliged to suppose them dreadful. Livingstone has written of a strange and not wholly displeasing anæsthesia possessing him as the lion which he had wounded clutched and tore at him. Others, however, who have suffered the like leonine embraces have not quite endorsed his opinion of their pleasantness.

“ But while we concede that these exceptions are mysterious, we must fully recognise that they are exceptions, and, even as exceptions, rare. Death so mercifully swift as to be accompanied by scarcely a sensation is Nature’s constant rule. Red tooth and claw are her instruments for the working of her mercy—of her mercy, not of her cruelty. Let us wipe our eyes clear of the cobwebs and see clearly. Neither the tiger nor the wolf, which we take for our emblems of all ferocity, is cruel. There is one cruel animal, one only—man. Still, in regard to him likewise there is no need for us to deceive ourselves. Cruel he is, beyond all beasts, yet we may claim for him virtues beyond

theirs—self-sacrifice and heroism, not merely instinctive, like that of the ant or bee, but deliberate, of free choice and undertaken in full knowledge of what self-sacrifice may mean. But Nature's tooth and claw redden in truest service to her children. Consider but a moment how it would be were she never so to blood her fang or talon, never to cut the quick life short, to leave all to the long death of disease, chance hurt, or senility. It is enough to merely think of her stage set to such hideous drama in order to realise the high mercy of her swift-dealt deaths."

Launceston's voice had been going a little husky. He broke off to take a sip of water, and during the pause a murmur of something very like distant or decorously hushed applause sounded in the room. It was an exceedingly rare testimony in our Club of the interest which the debater had excited, for our usual atmosphere was rather chilly in its reserve and silence.

"After all," he resumed, in tones which flowed a great deal freer for the lubrication, "after all, there must be pain." He paused a moment upon this sad necessity as if to allow it time to sink into his hearers' minds. It was a moment of which Foljambe availed himself to growl out the question: "Why the dickens should there be?" A wintry smile glimmered in Launceston's eye as he identified the growler.

"Because, old fellow, if it was not for the gout in your big toe you would drink so much port that you would soon be lost to a circle of admiring friends. This, however," he continued, "is only a modern

instance. In order to appreciate the true value of pain in the course of evolution we have to look both higher and also lower than this toe which does so much good service to society as a danger-signal to our valued friend. We have to imagine in the first place that there was a time, there were, in fact, many millions of years of the earth's history, in which no pain was known upon it. There were all the ages when the planet was cooling and consolidating down from a gaseous to a fluid and thence to a semi-solid mass, ages in which it was impossible for life in any form to be developed, or to subsist, upon it. Then came a period when, by some means that we do not understand—perhaps by a special creative act—life, first, as we deem likely, of the plant kind, made its appearance on the terrestrial scene. Still, as we suppose, there was no pain. Then came animal life, protoplasm, and from that humble beginning some philosophers have deemed it possible to trace a development without a break to the splendid creatures now gathered in this room. And just at what point in that tremendous procession came in the feeling of pain we cannot precisely say, but we may presume with tolerable certainty that it was many millions of years in time, and many thousands of stages in development, before anything at all worthy of the dignity of the name of man made his bow on the stage.

“The expression ‘feeling of pain’ is almost redundant. Perhaps it would be enough to say ‘feeling,’ without addition, for it is hardly possible for us to think of feeling, of sensation of any kind,

without conceiving the possibility of an extreme of that feeling which has to be one of two things, either pain or else pleasure. A feeling which is neutral, inspiring neither pain nor pleasure, is conceivable, indeed, but its conception seems to carry with it the necessity that on either side of this neutrality lies a sensibility to pain or to pleasure, as the case may be. In brief, it is impossible for us to conceive of sensation without conceiving also the sensibility to pain ; and if we accept that conclusion we seem very hard on a justification and an explanation of all the pain that so puzzles us in the world. It is impossible, humanly speaking, to conceive of sensation without sensibility to pain, and it is impossible to conceive of progress on the lines of evolution without sensation.

"The immense part that sensation has played in the evolution drama hardly needs to be elaborated. The principal distinguishing mark of animal from plant life is that it is mobile and that it is sensitive. This is a general statement which may be allowed to stand in spite of such exceptions as the fixed barnacles, polypes, corals, and so forth, in spite of the fact that some animals are mobile in one phase of their metamorphosis and immobile in another, and in spite of the dispersion of certain plant seeds, such as those of the dandelion. It is true, too, that we see plants behaving as if they had sensation. The popular instance is the so-called 'sensitive plant,' which retracts itself from contact.

"Movement is equally reflex and automatic, no doubt, in the case of animal life in its lower

forms, as in the case of plant movement, or even in inorganic bodies. No one can say exactly at what point sensation comes in, to give a new motive to action, but probably it begins far back. It would seem as if sensation of some kind were almost necessary to the preservation of the life of any moving object, since, but for such sensation, the creature would go blundering into all kinds of obstacles. From these beginnings we may suppose a gradual development in the appreciation of the pleasant and of the painful respectively, until the effort to attain the one and to avoid the other becomes the instinctive action of the race. Their discrimination would very soon be essential to the maintenance of the life and health of the individual and the species.

“The argument might be developed almost endlessly, but it is so obvious and simple that it hardly needs more than stating. These few words are enough to call to mind its leading points: and they carry us unfailingly to a threefold conclusion: (1) that sensation is hardly conceivable without involving the conception of pain, (2) that evolution itself is hardly conceivable without involving the conception of sensation, and (3)—which I have not yet stated, but which is no less manifest—that human nature, as we know it, is hardly conceivable without involving the conception of evolution.

“That brings us, of course, to the great question of questions: ‘Why evolution? Why was it by this mode alone, rather than another, that it pleased the Creator to produce man on the earth?’ I speak in the anthropomorphic way of the First Great

Cause because it is the simplest of the various denotations of our ignorance. I do not suppose that we are likely to find the answer complete in this terrestrial life. It is one of those ultimates of which the final solution must surely lie in some quite different environment. It does seem, however, as if we could give some account, more or less to our satisfaction, of such a less ultimate question as the reason of pain. Pain is a necessity of sensation, sensation a necessity of evolution, evolution a necessity of the moral nature of man. As Sir Oliver Lodge writes : ' Perfection of machinery would be too dull and low an achievement—something much higher is sought. The creation of free creatures who, in so far as they go right, do so because they will, not because they must—that was the Divine problem, and it is the highest of which we have any conception.' And therewith, so far as it may be given here on earth, we have, perhaps, the answer to that question, ' Why evolution ? '

" One of the frequent obstacles to a reasonable faith in the blessed conviction that ' God's in His Heaven and that all's right with the world ' is the difficulty of conceiving why the Creator, if He be all-powerful, should not have created man in the first instance with a nature that did not involve all this pain and suffering. That, as I say, is one of the ultimate problems of which the solution probably is not anywhere writ large for us in the terrestrial story—nor, perhaps, will it be. But we may, at the least, say this, in regard to it, that humanly speaking it is altogether impossible to see how man

could be such as he is had he not been made in this way—the way of evolution. Had he been created perfect, in ‘perfection of machinery,’ as Sir Oliver has it, free of pain, as of evil, he might have been indeed a noble creature, but he would have been a creature vastly different from man. He would have been no longer a creature rising by the dint of effort. This, then, may be our answer to those who ask us why it is that God did not make man free of all this suffering : that, no doubt, He might have created such a being, if He would, but that if He had, or has, it would have been, or is, some being other than man.

“ And in the meantime, as to this problem of pain, we are obliged to recognise our pain as inseparable from the gift of sensibility ; and that is a gift which we surely would not, even if we could, renounce wholly, even for the sake of being quit of all the suffering. Were we to do so we should, of course, renounce therewith all the sensible pleasure that we enjoy in life. And such renunciation could only be possible to an absolutely suicidal pessimism. It would be equivalent to denial that life in itself is good—and that is a conclusion which convicts him who maintains it of insanity in any court composed of living and life-loving creatures. It amounts, besides, to blasphemous and presumptuous arraignment of the Creator.

“ Assuming the wisdom, therefore, as we needs must, of the creation of man by the way of evolution, with the nature which we actually find in him, pain has its plain use as a discipline in the formation, in the strengthening, and, at the same time,

in the softening of that nature. No one, I think, has written more strikingly in this sense than Dr. Moberly in his *Sorrow, Sin, and Beauty*. It is indeed a commonplace that the character is refined by suffering, that sympathy and real goodness and moral worth are seldom to be found in those to whom the personal touch of sorrow has not come. And granting, as grant we must, that evolution was the way of wisdom for the creation of man, and that pain was a necessity of evolution, we are further driven to concede that pain was a necessity for those beings lowlier in the scale who preceded man in evolution's process. Sensibility was a condition of their evolution and, moreover, it gave their fleeting existence its joy ; that it was sensibility to pain as well as to pleasure is a condition inherent in the relations between the two ; their pain, their joy, their sensibility, their nature were the foundations of the higher sensibilities and the higher nature evolved, from them, in man. Man individually advances on stepping-stones of his dead selves : mankind advances on stepping-stones of its own dead forebears : the advance of those, man's human forebears, was on stepping-stones of the lowlier dead who lived before man. They, too, are his forebears, in more remote degree : all life on earth, and, maybe, illimitably beyond its confines, is akin.

"For all which reasons," said Launceston, folding up his notes, "I conclude as I began, there must be pain."

"Well," said Pershore, after a pause, "perhaps you are right, Launceston, that there must be pain."

Perhaps you have solved the problem satisfactorily for yourself, possibly even for me ; but you have not met the trouble which I find so constantly vexing my patients—why, if pain at all, there should be so much of it—why, to put it in that crudest form which is so common, ‘ God does not stop the war.’ ”

“ Surely you know how to answer them when they ask such a silly question as that ! ”

“ I know how I do answer them, at all events. Practically I answer them out of the mouth of our friend Soddy—that it is not the material man, the man composed of matter and energy ; the transitory mortal man, that God concerns Himself about, but the immortal man, the real man, the permanent personality, the soul. God is indifferent to the man’s pain : we only obscure such dim vision as we have of Him by trying to prove Him otherwise.”

“ Bad diagnosis, Doctor,” Launceston retorted. “ Or, at best, partly right. You spoil all by that word ‘ indifferent.’ Say, rather, He does not interfere directly with the material man, allows matter and energy to go their way, yet indirectly intervenes by influence on the spiritual man, and so, and not otherwise, has His hand in the guidance, as I think Soddy calls it—the guidance, not the control, still less the coercion—of that machine which is the material man.”

“ Good,” Pershore admitted. “ I accept it as the better diagnosis. I am content to take it so. But how many of my patients shall I get to understand it ? ”

"Exactly as many as have personally realised that influence, and not one more."

"That won't amount to a very large number. But, to leave my unfortunate patients, you are aware, of course, that there are some very remarkable consequences flowing logically out of your conclusion."

"What is my conclusion exactly?" Launceston asked rather aggressively.

"Well, your conclusion, or one of your conclusions, obviously is that the quantity and intensity of pain on earth is greater since the evolution of man than at any previous time."

"Certainly!"

"And that—don't you see?—amounts to a very considerable arraignment of the whole scheme, the whole idea of the creation of terrestrial life—that its most finished product, so far, is its most unhappy."

"When you say it amounts to an arraignment, Pershore, you are making, apparently without being aware of it, two large assumptions—first that there is a scheme, a purpose, in the world's creation, and second that the scheme has failed because man suffers pain. I admit the first assumption, the teleological assumption as the lovers of long words would call it. It does not seem to me that the whole thing has any sense or reason that can be understood by the human mind (and that is the best and only mind that we can bring to bear on it) unless we understand it teleologically—dreadful word! But as for your second assumption that the scheme stands a confessed failure because of

man's pain—well, I've about as much use for that view as I have for some of the nasty medicine you try to make me take."

"Very well, then : you don't admit it a failure. How are you going to justify it ? "

Launceston smiled grimly. "Don't you remember," he asked, "the criticism on a certain editor of a certain scientific journal, 'He seems to forget that he is only the editor, and not the author, of Nature' ? I am neither author, nor even editor of Nature. Why, then, should I have the job of justifying her ? Still, I will say this, and I am rather glad to have the opportunity of saying it and of making a confession of my creed, for what little it is worth : The very fact that Nature, or the Creator, or whatever term you please to use, has evolved creatures with an increasing, rather than a diminishing, rate of suffering is proof positive, to my mind, that terrestrial happiness is not the end and object of it all. There are many other testimonies—I mention this only as part of the 'cloud of witness.' What, then, are we to suppose the purpose to be ? The answer, as I think, is very much that of the Scriptures, both the new and the old, derided by the neo-Darwinian and Macadamite schools : Not here on earth does evolution (with man, as its highest product, so far as we, terrestrially, know) find its goal : there is a 'beyond' in which that which is 'real' in man, that which is permanent, his soul as distinct from that machine composed of a temporary combination of matter and energy, or of energy in matter, which we call his body, will develop further than it possibly can

within its mortal body. Really it is to the essentials of the old simple faiths and hopes that science, after misleading us awhile into all sorts of uncomfortable and dark, cold places, blind alleys from which there was no exit, seems to be guiding us back. These faiths and hopes did not come to man by any effort of his reason, but rather by some more primitive source, so that when his reason began to introspect and to take stock of what it found, it found those faiths and hopes, found them and criticised them and often found them most inconclusive and unproven according to its own standards of judgment. It has rejected them therefore, has discarded them as objects of derision, but still they had a vitality, and now that reason in these latter days has come to a clearer vision under the rays of the new scientific searchlights, reason herself is donning the white sheet of penitence and confessing that she finds her own latest conclusions falling into strange and unexpected acquiescence with those old beliefs in which she had no part and which she regarded as purely childish things. Science to-day is a pious theist."

At this, it was Tilden that put himself into the discussion. "Have you done with him, Pershore?" he asked. "There's a word I should like to say to him. I think you've let him have his conclusion too cheap."

Launceston's eyes brightened with the gleam of battle. "What is it?" he asked.

"Well, really, it isn't so much your conclusion as one of your premises that I wish to dispute:

you take the view that man is not happier but less happy than the brute. Is not that so ? "

"Certainly."

"Well, that's where I don't follow you. I allow you, of course, that the brute does not die the thousand deaths of apprehension and so on before its time—that is indubitable—but then, look at all that a man has on the other side, the pleasurable side, to set over against that—all the expectation of joy that he has, his hopes. What I quarrel with is, that you give too little value to his hopes, too large a value, relatively, to his fears."

"I don't agree, Tilden. 'Care killed a cat,' they say. Don't you believe it. Care never killed a cat, nor even the smallest mouse ; but it has killed and will kill many a full-grown man."

"I agree that before there came a mind there could not come mental pain, grief," Tilden said. "That is plain. Equally, before there came a mind there could not come mental pleasure, the delight in intellectual achievement, the very mysterious delight that we take in beauty and in moral goodness, the pattings on the back our friend Conscience gives us (that is, when we deserve a patting—he can smack hard enough when we deserve a smacking). All this, I say, to man's credit balance outweighs the debt which is made up of his worries and his fears."

"Tilden, you are wrong—I am certain you are wrong," said Launceston, speaking not at all aggressively, but very earnestly. "You are wrong, I am sure, if you are balancing the account in the scales of *happiness* alone. That is, I think, the

point. The right scales to use are not those which make happiness the standard and criticism. Suppose we leave the brute a moment: suppose we come a stage or two higher: suppose we put into the scales of happiness on one side an agricultural labourer plodding after his plough, on the other a genius—a Dante, a Napoleon. Which way will your scales tip?"

"I suppose for brute contentment, for peace of mind the plodder has it, but——"

"Just so—the plodder has it. That's all I claim. I claim that for the plodder. But I grant you also your 'but.' There is the 'but.' And in the 'but' lies all the difference, the difference which means so much."

"And you would say that savage man is happier on the whole than civilised man."

"Ah, that's another story. The life of savage man is so beset by fears, taboos, ghosts, bogeys, and a thousand inventions of his childish (although human) mind that he is a prey to worse fears and cares perhaps than any others. He feels pain less, physical pain—that's to his credit. If it were not for his superstitions, I should rate him happier than the civilised man; but, again, it's a big 'but.'"

"Well," exclaimed Foljambe, as Tilden made no reply, "I never heard such a pack of nonsense in my life. How would you like, I should like to know," he said to Launceston, "to be an Esquimaux? I'd like to see you."

"Daresay you would, old fellow, and I shouldn't like it at all. The climate wouldn't suit me, and

I doubt if I could digest blubber. But," he raised his eyebrows and looked at his questioner as one who observes some remarkable curiosity, "is that inquiry of yours really intended as a valuable contribution to the discussion?"

Foljambe's answer was lost in deep growlings of which all that I made out articulately was, "Wish he would go and live with the Esquimaux. Might teach him manners."

I asked Pershore what he thought of it all, as the meeting broke up.

He replied by a question: "Which would you say was the happier man, Foljambe or Launceston?"

"Happier? Oh, Foljambe without a doubt."

"And now, if you were to be born again and a fairy godmother were to offer you choice—which would you be, Foljambe or Launceston?"

"Launceston or Foljambe? Why, Launceston, of course. How could anyone——?"

"Just so. And you're like evolution. It's not happiness merely that she's after, nor you neither in your heart. There's something else, something different. What is it?"

CHAPTER X

“WHAT IS SIN?”

“He ought to know what pain is, poor fellow,” said Pershore to me in the evening following that on which Launceston had given his address on the grim topic.

“Does he suffer so much?” I asked.

“Horribly, I’m afraid, though of course he makes light of it.”

“What is the matter with him?”

“He’s poisoned, of course, poisoned by these gases he’s always experimenting with—gases to kill the Boche and stuff to neutralise the effects of their gas on our fellows. It’s a curious thought, but I suppose if we trace things back to their ultimate causes, humanly speaking, there’s no other one man who has killed so many Germans as Launceston. He’s saved untold numbers of our soldiers, too, by the masks and the antidotes. Worst of it is, he’s giving his own life.”

“So bad as that?”

“Just about. Every organ nearly functions sluggishly, is drugged, and he suffers gastrically—never free from it. That’s why we must bear with him; why we do bear with him; why, even dear old Macadam should bear with him, though he’s sorely tried, that old Scot.”

“Too bad,” I said. “He’s downright rude, you know, to that poor old fellow—great man in his day, too. Why is it? Why will Launceston take any silly nonsense you please from Foljambe, yet gets mad, like a bull that sees red, at a word from Macadam? Why is it?”

“You’ve said it and you’ve answered your question. He doesn’t get mad with Foljambe just because it is such silly nonsense that Foljambe talks. He’s only a clown—stands for nothing. But Macadam is something, and the something he stands for is just that which Launceston hates most—the science of fifty years back—mind and matter—the unbroken succession—rather deadly! That’s why Launceston hates it. ‘Science is theist’—that’s his cry. Macadam wouldn’t say it, perhaps, but that fifty years old science of his is very near atheist. Says its agnostic, but says too that it knows, and is able to account for, so much, that the gnostic (materialist in his gnosticism, too) leaves the agnostic a very small playground, gives the *theos* a very small finger in the pie. Launceston can’t bear that. He thinks it a creed fatal, lethal, to the best in man—has a deep down, considered hate of it. Add to this the irritability of a really ill man, originally very sensitive, I should think, and overlaying his thin skin with a manner of cynicism, and now poisoned, sickened, penetrated with those filthy fumes—you can’t wonder he jibs and kicks quite unreasonably at the man who incarnates for him this creed, and all the more that the man bears a name rightly honoured and to which Launceston himself in his heart pays honour

—honour for his past great labours, not for his present faith."

"But how is he really—Launceston, I mean? Not dying? Not doomed?"

"I don't say he's in imminent danger of death at the moment. He would have been, would have been dead by now if he hadn't taken care, slackened off a bit, taken some more fresh, clean air into his lungs, six months or so back, when I took him in hand. Probably he's shortening his life and injuring his health still; but he isn't as bad as he was. Hullo!"

The 'Hullo!' was for Launceston, who entered the room at the moment. He looked ghastly.

"How goes it?" asked Pershore in a tone ringing with cheeriness, several notes higher than when speaking to me of his patient. Unsympathetic, he sounded, but that was his rôle—to cheer, to persuade a sick man to think himself better, to dose him with hope and with faith in himself and his power to recover.

"Never so well," Launceston answered. "I've got it, been at it all day, got a gas that will do—heavy—will go down and look for them, down in a dug-out—heavier than air, sinks, goes down like a ferret to bolt them. Been at it all day."

"You look it."

"Look what?"

"Sick. Ill. Green. Poisoned."

"Thanks—you flatter me."

"Get out of this, man, get out, breathe some fresh air, walk. Or, better, get on a horse and ride—gallop."

"A horse! Ride! Gallop!" said Launceston severely, "I consulted you, Doctor Pershore, for a means of prolonging my life, not for bringing it to a sudden and violent end."

"That's better. While there is humour there's hope. But really, dear fellow, breathe some fresh air, not always those damnable gases."

"Beautiful gases! Think of it, going down after them—fetching them out!"

"Horrible! Have you no conscience?"

"What's conscience?"

"Do you know what's the day of the week?"

"What d'you mean?—Oh, I see—a good subject for Thursdays? Perhaps. What do you say?" The appeal was to me, and delighted me.

"The natural sequence," I said. "After 'Pain,' 'Moral Evil'—the inevitable order. It could not be better."

Launceston's lethal discovery made him strangely amenable. For our next merry meeting he agreed on his theme—'Moral Evil.'

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"You, who are in this room," said Launceston by way of conciliating his audience at the opening of his address, "are miserable sinners—yes, I, too," he added in response to a growl from Foljambe of 'How about yourself?' Let us try to see why we are so.

"It is bound to cost us something of an effort to put ourselves back into anything at all like the point of view of primitive man thinking his first

dim thoughts, yet that is an effort I would ask you to make. We have grown into the habit, during the million years or so which have passed over the head of humanity since that time, of imagining ourselves as thinking out an action first, forming an idea of it, and then performing it. But primitive man almost certainly did not act thus. On the contrary, he found himself, so soon as he was able to think and take stock of himself, doing a multitude of actions by instinctive habit. The actions were all there, being done, and he was there doing them, long before he began to think about them, and long, again, before he began to think first and to act afterwards. The modern order was almost certainly reversed in those early days of man's self-consciousness.

"And, as a matter of fact, the actions which we think out and plan, before doing them, bear very much less proportion to the total sum of our actions even now than it is quite easy to realise. Yet if we will consider the day's work we shall have to admit that it is so. Almost without a thought, almost automatically, we perform the actions which have become so habitual, of our bath, our shaving, our toilet, and so forth. Our minds may be deeply engrossed with some quite different thought, all the while. I write as a man—far be it from me to say that a lady's toilet is not matter of anxious reflection.

"So, if you will follow out your actions throughout the day, you will be astonished to find how many are done without thought given them. And fortunate it is that it should be so. The act done

automatically is done with economy of thought and nerve stress. We should have neither leisure nor vigour to think of anything really interesting at all if an immense number of our daily acts did not achieve themselves without any attention directed on them.

“ With self-consciousness came freedom, because previously the motive which was momentarily the stronger commanded automatic obedience. With self-consciousness, man was able voluntarily to reinforce one motive at the expense of another by directing attention on it. Whereupon responsibility began—conscience was born.

“ The best account of the origin of moral evil and of conscience, from the modern scientific standpoint, of which I know, is that given by Dr. W. H. B. Stoddart in a small volume called *The New Psychiatry*, which consists of the Morison Lectures delivered by him at the Royal College of Physicians of Edinburgh in March 1915. Dr. Stoddart is a very distinguished medical psychologist. Possibly his is a name not known to many of you, but there is none that stands higher with those who are interested in his special study—mental disease and its cure.

“ His first lecture, to which he gives the title of *Fundamental Psychical Mechanisms*, he opens with the heading ‘ *Instinct*,’ and proceeds : ‘ In order to gain clear insight into the principles of abnormal psychology, let us by way of preliminary examine the human instincts.’

“ I have no intention of following Dr. Stoddart into the abnormalities, which lie quite outside our

present discussion. The normal is quite difficult enough for us.

" 'Instinct,' he writes, 'is the blind prompting inherent in an animal to act in a certain way. An instinctive action is practically perfect on the very first attempt, although there has been no previous education in its performance, and it is of such a nature as to produce certain ends without foresight of those ends. Instincts are perhaps most characteristic among the lower animals. As examples, sexual acts, migration, the first year bird building her nest and sitting on her eggs, nutrition and care of the young, the lion stalking his prey, and the congregation of certain animals into shoals, flocks, and herds. In man we may instance the first attempts at speech by the human infant, the first attempts to walk, the avoidance of filth, making collections of all sorts of things, seeking the company of the opposite sex, nurture of the young, and the congregation into towns and cities. These are but a few examples, but, even if the list were complete, it would be found possible to group all the instincts under two headings, viz.: those subserving the function of preserving the individual and those subserving the function of perpetuating the race. They have also been classed into three categories, according as they are moved by the promptings of self-preservation, nutrition, or sex.'

"So far he is on ground which is likely to be familiar to all of us. He proceeds in his next section to the discussion of what he terms 'The Herd Instinct,' as follows:

" 'Now Dr. Wilfred Trotter, in two very able

articles in the *Sociological Review* for 1908 and 1909,¹ has drawn attention to the existence and importance of a fourth instinct' (in addition to the three above mentioned), 'gregariousness, or, as he calls it, the herd instinct. Although this has long been recognised, it had never before been seriously contemplated and studied. When we come to think of it, man is much more dependent on communal life than appears at first sight. Left to himself, he is not only extremely miserable, but his faculty of speech is useless to him and he stands little chance of survival among the other animals. Moreover, his conduct is very largely regulated by the customs of his tribe.

" 'The advantage of gregariousness lies in the homogeneity of the herd, which enables large numbers to act in concert. In hunting and warfare, for example, the advantage of this is obvious, for the prey or enemy is more easily vanquished by a large number of hunters than by a single unit. Such homogeneity is assured by an inherent impulse of each individual to behave in the same way as his fellows, and those who depart from the usual customs of the herd cease to benefit from the advantages of gregariousness. The herd instinct, like other instincts, is maintained by natural selection.

" 'So it happens that in company there is an unanalysable feeling of comfort, in solitude there is an unanalysable sense of restlessness and discomfort. This is just instinct. Similarly, if we

¹ Expanded later into a volume—*The Herd Instinct*, by Dr. W. Trotter.

depart from the customs of our particular "set" in matters of dress, amusement, religion, or politics, either we feel uncomfortable or we are regarded as eccentric, and ostracised. Stage fright and shyness are the outcome of an instinctive desire to leave our conspicuous position and to become once more one of the herd. . . .

" 'Again, man is readily prepared to accept suggestions which are in accord with the traditions of his particular herd ; but he is disinclined to receive new truths which have been revealed by experience. People refused to look through Galileo's telescope, Darwin was considered a mad-man, the clinical thermometer was laughed at, people refuse to believe in vaccination or inoculation of any kind, new diseases are figments of the imagination of their discoverers, and psychoanalysis is immoral, because the new must always encounter the opposition of the herd tradition. But it must also be remembered that in such instances herd tradition has to encounter opposition from the new, and may be gradually overcome until the experience becomes incorporated with the herd tradition.'

" He goes on to argue that in matters of opinion, such as politics, religion, finance, education, art, literature, and all sorts of public problems, the opinions of people ranged on both sides are based on 'herd tradition,' and after a brief development of this thesis he proceeds to what are really, for our present inquiry, the most important passages of all : ' We have so far been discussing the influence of the herd instinct on intellectual processes, but

we shall find that it also lies at the basis of our moral sentiments. Whenever a man does anything which he knows would meet with the disapprobation of friends he experiences a feeling of uneasiness, similar to that caused by isolation, solitude, or separation from the tribe, a feeling of guilt ; and when he does something which would be applauded by his fellows, he has a sense of happiness and self-satisfaction. This is, then, the basis of the moral sentiment with which the voice of conscience is indissolubly associated. A non-gregarious animal can do what he likes : it has only itself to consider.

“ ‘ There is a fundamental difference between this herd instinct and the personal instincts of self-preservation, nutrition, and sex. These are dependent on the impulse of the moment ; but the herd instinct is a controlling influence from without, which is perpetually acting in antagonism to the other three.’

“ Elsewhere, writing of the conflict which frequently ensues between the ‘ herd instinct ’ and the ‘ personal instincts ’ he writes : ‘ The herd instinct is a true instinct and refuses to be repressed, with the result that the patient ’ (who refuses to be guided by it) ‘ suffers from remorse, usually accompanied by an unexplained headache and other neurasthenic symptoms.’ The idea of the ‘ unexplained headache ’ of conscience,” Launceston remarked, “ suggests an influence which might be turned to some moral value. There are those who would be more amenable to the threat of an aching head than to that of the mental disturbance more usually associated with ‘ a bad conscience.’

“Now, is it not manifest what all this means—what it implies? It surely means that man, so soon as he became man—that is to say, so soon as a creature was sufficiently developed to be able to regard itself in any self-conscious way and to be aware of the nature of its acts—so soon as this great era in evolution arrived, man found himself with a conscience ready made, so to say: he perceived himself already as a creature influenced by a double set of motives, by a two-way tug—one motive pulling him towards that which his purely personal instincts suggested, the other towards that which was for the good of the herd. When he yielded to the former he knew discomfort—the discomfort of an inhibited impulse—conscience-sting.

“In this connection some remarks of Professor Lloyd Morgan are very well worth attention: ‘The satisfaction or dissatisfaction,’ he writes, ‘arising from the performance or non-performance of instinctive behaviour, evolved for the biological end of the preservation of the social community, is the perceptual embryo from which conscience is developed.’

“He then proceeds to quote Professor Mackenzie, in his *Manual of Ethics*, pages 285, 286, on ‘ambiguities in the use of the term “conscience.”’ It is sometimes used to express the fundamental principles on which the moral judgment rests; at other times it expresses the principle adopted by a particular individual; at other times it means “a particular kind of pleasure or pain felt in perceiving our own conformity or non-conformity

to principle." This last seems to me the most convenient acceptation of the term, except that I should prefer to say simply that it is a feeling of pain accompanying and resulting from our non-conformity to principle.'

"Lloyd Morgan further observes that such a definition presupposes the existence of a principle or ideal. 'In the case of the animal,' he adds, 'such an ideal of right conduct has probably not taken form. But Mr. Mackenzie also speaks of the "quasi-conscience" begotten of custom. This comes nearer to the feeling which animals may be supposed to have when their behaviour does not accord with that which, through instinct or habit, is the usage of the community. And if, as seems to be shown by observation, animals sometimes punish the breaches of such usage—when, for example, cats punish their kittens for uncleanness—the quasi-conscience will assume a more developed form.'

"I do not much like this word 'punish,' as used here," Launceston remarked. "It seems to imply a moral purpose of which there is no evidence. I rather incline to think that the cat is angry with the dirty kitten and therefore chastises it, obeying the impulse of its anger. The *effect*, doubtless, would be to tend to the reformation of the kitten's manners; but that is not identical with the assumption that the old cat had this reformation in mind when it inflicted the pain on its child—and no less than that is the assumption which seems to be involved in the use of the word 'punish.'

"Professor Morgan draws the conclusion that

‘long ere, in the course of mental evolution, the correlative conceptions implied in the phrase “right or wrong” had taken definite form, perceptual situations must have arisen in which behaviour carried with it the feelings of satisfaction or the reverse which laid the foundation of that approbation of the right which forms the superstructure we build upon them by the exercise of reflective thought.’

“Maybe. But whether or no we accept this view of a ‘quasi-conscience’ actually evolved in non-conceptive mind, assuredly we have its material ready to hand in the two-way tug of conflicting impulses to which the social animals are subjected. In less degree, and more temporarily, we see the same conflict in the family life of many of the animals which we should not especially describe as social. The first indications of it are there.

“There are two passages in Mr. Hobhouse’s *Mind in Evolution* bearing directly on this point, the evolution of conscience, though Mr. Hobhouse himself does not explicitly make use of that term. In Chapter XI, under the chapter-heading ‘Social Instincts’ and section-heading ‘Animal Morality,’ he writes: ‘The higher animals lead a social life, not only in the sense that they congregate together like swarms of gnats or shoals of fish, but in the sense that they have social or family relations with one another. In these relations, acts of mutual help or forbearance are involved, and it is out of acts of mutual help and forbearance that morality as we know it among men is built up. Are we then to attribute morality to animals? Have we the

right to praise or blame them, to apply to them epithets implying a moral significance? This question, so far as it is not a question of words, will be found to resolve itself into a question of the degree of intelligence which we impute to animals.¹

“Mr. Hobhouse’s bent is to ascribe a very high degree of intelligence to animals, but, for all that, he hardly cares to credit them with a moral sense, though he quite justly credits some of our domesticated animals with a sense of remorse when they have done that which they ought not to have done. Even here, however, it would certainly be more exact to say ‘done that for which they remember that they have been punished’—the pain being associated with the wrong act. ‘It is quite possible,’ he writes, ‘that even in animal life, when there is a conflict of desires, that one tends to prevail which is most intimately bound up with the animal’s whole mode of life. And, at least among the domestic animals, we see symptoms of shame and remorse when, under the stress of momentary excitement, such an impulse is violated—and remorse is precisely the tingling with which the permanent character, the real self, comes to life again.’

“This, surely, is very near a description of conscience in its less spiritual form.

“It is a rather curious reflection, that if it had happened to be creation’s plan that self-consciousness should be the acquisition of another branch of the great life-tree—that branch which the social hymenopterous insects form—they would have had

¹ *Mind in Evolution*, L. T. Hobhouse (1901), pp. 272, 313.

no conscience thus ready made for them. They would not have found themselves subject to this two-way tug of motives. These creatures are perfectly and singly obedient to the herd instinct. The ants, for instance, work purely for the good of the nest; they have lost (I put it in this way because it seems tolerably certain that they are derived from ancestors that had it) the self-regarding instinct altogether where it comes into opposition with the good of the community. Self-consciousness would have revealed them to themselves as sinless.

"There is no very manifest reason, on the biological or the psychological side, why self-consciousness, free-will, and all that they imply should not have happened to hymenoptera just as well as to one of the primates. The ants had almost certainly (even at the date, which Dr. Arthur Keith, in his *Antiquity of Man*, puts at a million years ago, when man branched off from the common primate stock) travelled much farther along the instinct-driven path than any of these primates. Possibly it was just because they had gone so far on this path that this wonderful thing could not, even on biological grounds, have occurred to them. They may have passed the switching off points, so to say, and committed themselves too far on the one, the instinct-impelled, line. At all events we may say this, that it is difficult to imagine that they would have made as effective use as man has done of the intellect, had it come their way, for the physical, almost mechanical, reason, that neither their mouths nor any of their other organs or

limbs are so made that they would, as far as we may judge, have been able to produce any sound-signs at all comparable in variety and flexibility with our language, our tongue-signs. It is difficult to say just for how much the power of speech has counted in the development of human thought, but all who have studied the subject agree in putting its value very high. That is a limitation which some of the birds, of the crow and of the parrot kinds, for example, do not suffer from. Some of you may remember my old poll parrot friend whom I brought into the Club one night as a modern instance." (The pleasant smile which came to the faces of many of his audience at the reminiscence did not appear on the countenance of Sir James Macadam.)

"But apart from all the biological reasons why intellect, self-consciousness, and therewith free-will came the human, instead of the hymenopterous or any other way, we may perhaps be justified in thinking that it was in part on this very account. Had it become the possession of the ants they would have found themselves sinless, and the new acquisition would in that case have had no moral consequences. The creature that has no temptation towards sin has no motive to moral effort, no knowledge of it; the ethical problems do not exist for him.

"But—and this is a point which the debaters of the subject almost universally miss—it was only at the moment when sin came into the world that goodness made its entry also. All previous action, however right it was in the mechanical sense of

going true to a mark—the mark of subserving the interest of the species—yet in no true sense deserved to be called ‘good.’ Sin entered into the world because a creature became endowed with a recognition of the difference between good and evil. The allegory of the Genesis story is perfect here; but it is often forgotten that the forbidden fruit taught man good as well as evil. The case is very closely analogous with the entry of pain. Pain entered along with pleasure. Sensation implied the sensibility to one as to the other. So also, when man was evolved—a free and self-conscious creature, although we have to suppose that at the first his freedom was very dimly realised, very feeble, and his consciousness was no more fully developed—still, linked together and illuminated by the same flash, came moral evil and moral good. The sense of morality had to envisage the one, equally with the other, just as, when man began to use his reason and make his plans—incited by the *vis a fronte* instead of a *tergo*, as Dr. James Ward has it in his *Realm of Ends*, p. 440—he made wrong plans as well as right ones. Happily the right, both in rational and moral planning, and also the right—that is to say, pleasure—in sensation, was more frequent than the wrong; otherwise the coil of evolution must have retrogressed rather than gone forward.

“And this, further, is manifest, that if we are to presume that morality, the development of a power to act in a direction contrary to that in which the bodily passions and senses would impel, was a feature in creation’s scheme, so far as it

applies to our earth, then we must realise that this gift of will, self-consciousness, and reason had to come the way of a social, not of a solitary, animal. The other-regarding virtues could hardly come into being in a creature that lived in a moral isolation. He would owe no duty towards a neighbour, and his duty towards God could be only a reinforcement and expansion of his self-regarding virtues, of his duty towards himself. So long as he did not ruin himself by indulging his appetites unduly, it is hard to see what sanctions virtue could have for him. The Homeric Cyclops, living alone, had a full right to be, as he was, a law to himself.

“ Thus, had self-consciousness come to a solitary animal it would not have revealed this animal to itself as the inheritor of original sin, any more than had it come to the perfectly altruistic hymenoptera. In the latter event there would have been no sin, no two-way tug of motives, no conscience, because of the already absolute dominance of the other-regarding motives. The duty towards the neighbour was already perfectly carried out. In the former case again there would equally have been no two-way tug because there would have been no sentiment of duty towards the neighbour whatever : no neighbour, in a social sense, to whom duty was due.

“ It may be noticed also, that if, as seems to be probable, man was at least a semi-gregarious animal at the date when his brain was first sufficiently developed to entitle him to the name of man, then we have no need, as some philosophers have imagined, of seeking the elements of his

altruistic motives in the parental and the filial love. I do not believe that we are ever likely to know at all certainly whether man, on first coming into his kingdom as man, was solitary or gregarious. Professor Wood Jones, in his *Arboreal Man*, and many others have discussed the habits, in this respect, of the anthropoid apes, but the value of that evidence is diminished by the uncertainty of man's exact relationship to those apes. His stock quite probably branched off from the simian main stem before any of what we call the primates were evolved. But if parental and filial love were indeed the origin of all altruism it was an origin that had probably long been left behind by the time that man entered on his inheritance of human brain. The beginnings of that immense problem of altruism had been already solved for him by unconscious predecessors. He is still hammering away at it, hardly enough, and with very varying success, but with the immensely powerful aid which is at human disposal if man will but summon it—the spiritual aid of the God who has made him what he is."

Now all these addresses, or whatever they should be called—they were more than mere openings of a debate—of Launceston's were being given during the process of the Great War. Some had been delivered to the accompaniment of occasional 'Whizz, Bang!' and so on, as bombs were dropped from the air and our anti-air guns replied. Two of the addresses he had to interrupt for a while until the tyranny of noise was overpast, and one was broken off altogether, when the raid was a long

sustained one. The audience had taken these incidents very quietly, and they did not seem to affect the lecturer himself at all. But never, as I think, had the loudest of the explosions created anything at all equal, in the nature of startling sensation and amazement, to this announcement of Launceston's thus casually dropped in very midmost of his discourse—"the immensely powerful aid which is at human disposal if man will but summon it—the spiritual aid of the God who has made him what he is."

How is it that the singular murmur is produced when a speaker creates that which the reporter writes down as 'sensation'? Is it a shifting of the feet and of the body into a more keenly expectant attitude, a murmur of the lips? What is it? I suppose that it is a composite of all these elements. At all events it was just such a little stir as this that Launceston created by his announcement. He made it in his most careless manner, as if it were the most ordinary and most natural remark—and then he paused to drink a sip of water.

As soon as he had drunk the drop he affected to be enormously astonished by the surprise that his remark had caused. Of course he was not in the least surprised really: of course he knew that it was bound to cause startling surprise: of course it was just so, in order to create the surprise, that he gave it out exactly as he did, as a thing ordinary and inevitable; and of course it was just to enhance the effect that he drank his sip and so made his pause after it. It was all admirably done.

"You seem surprised by what I said just now," he resumed. "I don't know why you should be so much surprised. I have said more than once—haven't I?—that modern science was theist? Well, then, did you think I meant nothing when I said that? I did, as a matter of fact, mean a good deal by it. The very last thing that I have any claim to be is a theologian. You need not alarm yourselves by imagining that I am going to talk to you of anything at all in the nature of theology. I couldn't if I would, and assuredly I do not want to. But I do say this, that if we are not to believe and to affirm that man has at his disposal sources of divine spiritual aid on which he can draw if he only will—if we are not to believe that, we might every bit as well, for all practical human purpose, write ourselves down atheist at once. Don't you think so?"

Nobody seemed to be quite clear, or ready, with an answer. Davis, a young man just gone into Parliament, caused a laugh by suggesting that it was a question of which 'notice should be given.' That was the general feeling.

"Explain, please!" said Pershore, and Launceston went on again:

"What I mean is this," said Launceston impatiently and emphatically, "that people talk such nonsense—theologians talk such nonsense, the clergy talk such nonsense, the ordinary good Christian layman, or lay donkey, or whatever one should call him, talks such nonsense—cannot clear his brain of cobwebs—goes halting and mumbling between two opinions—tells you in

the first place 'you should pray to God, oh, yes! Pray to God and perhaps you will get what you ask': then you say to him, 'Oh, you are in communion, are you, with some Divine power?' and he is frightened at once. 'Oh, I don't know what you mean by that,' he says, "'in communion with.'" Isn't that mystical?'

"This," said Launceston, with keen scorn, "is what I mean by the cobweb-blurred vision, the confused mumble of speech. 'What is this prayer you pray,' I ask my friend then, 'to a being with whom you cannot frankly say that you are in communication? It is a prayer addressed to a void so far as any relationship between you and any person to whom it is addressed is concerned.' 'Ah, but I do not admit that I am in no communication. At times I hope, I even seem to feel that I am.' 'Oh,' I reply, 'you are aware of a communion?' 'At times I seem to be—yes, I believe so.'

"I conceive," said Launceston, addressing us now, and no longer his imaginary interlocutor, "that I have expressed the thing fairly—put the point of view (or of blindness) of most of the ordinary folk we meet, and even of most of the people who, since they presume to write on these subjects, ought to have thought them out. Why won't they be frank with themselves? Why won't they see clearly? Why won't they see that it must be one of two things—either they feel an influence from a spiritual source, or they do not—are consciously aware of it, as we are aware, say, of an effort of will that we make, or they are not so aware. And

unless they are so aware, what in the name of wonder does personal religion, does the whole spiritual side of man, mean to them?—a mere speculation, nothing more. So it strikes me, at least. In no other light am I able to see it. It must be there, this spiritual communion, or else spirit means nothing. How else will you have it?

“I do not mean,” he proceeded, speaking with a rare earnestness which greatly impressed all who heard him, “to leave it just there, without saying more on this point—that is, if you have patience to hear me, at some other time; but just for the moment I will leave it like that, so as to resume what I was saying on the subject of conscience—conscience, with its roots and its origin down there, as I have said, deep planted in the nature which man found himself possessed of, or possessed by, so soon as ever he found himself at all. Those are its roots, no less divinely planted, if you will, than any later nourishment and reinforcement sent from Heaven that the growing plant may receive, but assuredly to be so nurtured and strengthened as it grows.

“And the case of conscience is not peculiar in this regard. It only repeats, in its turn, the story of evolution which all the other faculties of our human nature reiterate persistently—the story of the increasing purpose. I can well imagine the objection of a critic to the ‘natural’ origin which is suggested here for conscience and for the sense of moral evil. He would claim for it a ‘supernatural’ origin, a spiritual. I would reply that the difference between us is mainly that he draws

a distinction between the 'natural' and the 'supernatural' which I am not willing to admit. Just what, I would ask him, does this term of his, this 'natural,' mean, in such an opposition? His only reply could be that the 'supernatural' is from God. From whom, then, if not from God, is the 'natural'?

"Surely, to any clear view, the distinction must vanish, the opposition is devoid of meaning.

"The divine reinforcement of the highest dictates of conscience, as an instinctive development, is beautifully expressed by M. Boutroux in his *Science and Religion*, p. 371, in Nield's translation. In the first place, he imagines a man arguing thus: 'Besides being an individual belonging to a natural species, every man is member of a human community. He ought, therefore, to comply with the conditions underlying the community's existence. And as, for each given community, at each given period, the conditions of existence are expressed by a totality of traditions, laws, ideas, feelings, which constitute a kind of social conscience, there is, for the individual who would be good for something, who would be himself in an objective and true sense, a second obligation to obey the rules of the community in which he lives, to be a submissive and active organ of that community.' Then he proceeds: 'What more does man need for the guidance of his life?'

"Well, argues M. Boutroux, besides these other-regarding motives, superimposed on the self-regarding motives with which instinct inspires him, man does need a good deal more. He needs

something which is summed up conveniently in the word 'religion.' And what M. Boutroux intends by the word, in this particular connection, he further expands, as follows (p. 380) :

"Religion 'believes that pure ideas, however clear they may be, do not suffice to move the will ; that what produces being is being, and she offers human virtue the support of divine perfection, in order to help it to exist and to increase.

" ' Religion, in the second place, as fully developed, is the communion of the individual, no longer merely with the members of his clan, of his family, or of his nation, but with God as the Father of the Universe, i.e. with God in all that is or can be. Religion is, henceforward, essentially universal. She teaches the radical equality and brotherhood of all human beings ; and she offers, as motive for the action of the individual, the conviction that, however humble he may be, he can labour effectively for the coming of the Kingdom of God—in other words, for justice and for goodness.

" ' Lastly, religion purposes to train man through an inward and substantial operation. It is not merely external acts, habits, customs, that she would teach—it is the man himself, in the deepest source of his feeling and thoughts, of his longings and his desires.'

"You see, he writes 'an inward and substantial operation.' Elsewhere (p. 397) he says : ' It is not without significance that the psychologist and the moralist consider mysticism an essential element, and, perhaps, the foundation of religion. All intense religious life is mystical, and mysticism is

the life-source from which religions, threatened by a formal and scholastic spirit, derive fresh vigour.'

"It is the source, too, from which the conscience, that has its roots in the herd instinct, is fortified, invigorated, purified.

"Conscience, no less than other faculties and impulses of man, has to submit to the criticism and in some part to the direction of the 'eye' of reason. A misunderstanding in this regard has led many into a difficulty which has no existence whatever except in the fog created by their own misty thinking. 'You tell me,' an objector will sometimes say, 'that conscience tells me what I ought to do. But how can that be? It tells me, a Christian, that I ought to be faithful to one wife. Yet it does not vex a Mohammedan because he has half a dozen. It applauds a Thug for the cutting of a throat. What kind of divine adviser can this be who bids me do a thing that it condemns in another?'

"A friend of mine whom I think I mentioned before—a clergyman of the Anglican Church— informs me that there are a large number of people whose way to faith has been sorely obstructed by some such stumbling-block as this. But surely no religious teacher, with even the most rudimentary equipment of psychology essential to his profession, could instruct his disciples that conscience 'tells people what they ought to do' in any sense of being a universal guide. Its main function is that of upbraiding them, of continually reminding them and of bringing them face to face again and again with their transgression, if they

have acted in a way contrary to that which they believe to be right. Yet there are times and there is a sense in which conscience acts as a guide, or, shall we say, rather as a finger-post, pointing the way? When the reason of man indicates to him alternative paths of action, either of which he feels himself free to take, forthwith, by aid of that same faculty of reason, he summons up before his mental eye a picture of the respective results of the two courses of action. It is then, in the presence of these two paths of possible action, that conscience serves the function of a sign-post at the junction of two roads; for the man, in his hesitation, feels that if he choose the one road conscience will condemn; if the other, that conscience will approve. Already, as he forms the two pictures in his mind, he may feel the faint premonition of the approval as he sets his face towards the better course, of condemnation as he turns it towards the worse.

"Such is the service of conscience while man is doubtfully deliberating on his act, but more often we realise it in its after-the-event operation, either as the approver of the righteous act, or, perhaps more often, the accuser, goading to renewed life the memory of an act done in contravention of the moral code of the actor. It has nothing to do, save indirectly, with the framing of that code.

"Partly for its bearing on this point, and partly for the light that it sheds on another point no less important for us to realise, I will conclude with a quotation from Bishop Gore's *Commentary on the Epistle to the Romans*, vol. i, p. 85: 'The actual conscience of the individual, or of the society, at any

particular moment, affords no adequate standard of right and wrong. The moral conscience, like the intelligence in general, requires enlightenment. It supplies no trustworthy information, except so far as we are at pains to keep it enlightened. More than this, its capacity to keep us admonished depends on our habitually observing its injunctions. To disobey conscience is to dull it and finally to make it obdurate and insensitive. The absence of conscientious objection to a particular course of action may therefore be due either to our having neglected to enlighten our conscience or to having refused to obey it. The duty of an individual to himself is not only to obey his conscience, but also to take pains to enlighten it. And the duty of the individual to society is to make continual efforts to keep the corporate conscience up to standard.' "

Launceston put his papers together. There were a few moments in which no one spoke. Then Tilden said: "I do not see how this exactly follows from your dictum that science is theist."

"I do not say that it does, exactly. I do say that science has ceased to be an obstacle to Theism as she certainly was fifty years ago. Do you not agree with me, Sir James?" He accompanied the question with a keen look towards the corner in which Sir James was sitting.

The old man was startled by the question thus directly posed. "Eh, what?" he asked.

"I am afraid that you do not agree, Sir James, with much that I have been saying."

"I agree with verra little," Sir James assented.

"Of most of what you have to tell us I am compelled to say that it is subvairsive, clean subvairsive."

"Subvairsive of what?" Launceston demanded irritably, with his odious imitation of the old Scotsman's accent.

"Of science, of all the findings of science."

"Subvairsive of the errors of a fossilised science of fifty years ago," Launceston retorted scornfully.

"Do you think we have stood still all the last fifty years, Sir James? Science to-day is theist, I repeat."

"It would be well an ye had, sir," was Sir James's answer. "Unfortunately ye have no' stood still, you have wandered grievously astray. In what sense, I would ask, is your science theist?"

"In the sense that it admits—that it imperatively requires—the creative act of a Θεός at a stage immeasurably later than your science of fifty years ago admitted it, even if it admitted it at all—that is, at the beginning of terrestrial life; and that it does not refuse, if it does not so imperatively require, another act of the Θεός at an immeasurably later period again—that is, at the beginning of human reason."

"Subvairsive," the old man repeated obstinately. "Utterly subvairsive."

Launceston turned from him as if exasperated. "It is not my own word I ask you to take," he said, as to his audience generally. "I refer you, as I have before, to the view of the great chemist, Professor Soddy, that physical science finds, outside and apart from her own domain, a something

in man which is permanent and is therefore real, as his mortal body is not ; that is, his spirit. In that sense is science, physical science, theist. It is not within her province to discuss that spirit, but it is within her province to realise that it is there. She realises it in the very act of defining that province, which places the human spirit outside that defining line. In such sense, at the least, and in my opinion in far fuller sense, is modern science theist."

CHAPTER XI

ALTRUISM AND EGOISM

"I'VE been thinking over those two breaks of yours, Launceston, in the course of evolution," said Pershore, a few evenings later. "There's an awful consequence that seems to me to flow from them."

"Don't frighten us. What is it?"

"That, if we admit two breaks, what guarantee have we that there may not be a third—that we may not, even now, at this very instant, be on the verge of a new revelation?"

"Is that all your 'awful consequence'?" Launceston asked.

"That's all, and enough, too, I think."

"It's not all that I'm willing and anxious to grant you," Launceston answered. "As I thought I had said before, I am disposed to think that not only are we not to be guaranteed against a third break, but that a third break is with us here and now—that we are in the very breach, or in process of being broken—however you like to take it."

"What in the world do you mean?"

"Oh, I do not say that it is in the world, if by the world you mean this planet of ours. In part it is in the world, of course, seeing it is in us; but in most part outside it."

"Explain, please," said Pershore, in his usual formula.

"Explain!" Launceston repeated. "That means 'level out,' I suppose—make all the ground smooth. Well, before I can even begin to do that there are some preliminary obstacles to clear off. A good many of the things which make it difficult for most of the people I talk to and read about to get hold of a tolerably intelligible view of the general scheme of creation do not seem so very difficult to me. For instance, as I have tried to show, physical and mental pain and also moral evil appear to me explicable. On the other hand, there is much which does not seem to bother most folks at all yet which strikes me as quite unintelligible from any scientific point of view. What account can science give us, for example, of man's æsthetic sense, of his content in sacrificing material satisfactions for the gratification of an ideal, of his altruism?"

The sound of the clearing of a throat, quite inarticulate yet with a significance of dissent which was quite unmistakable, came from the arm-chair in which sat Sir James Macadam.

"Yes, Sir James?" said Launceston. "Did you speak?"

"I did not," the old Scot replied; "but I thought."

"Rather audibly!" observed Launceston. "May we hear what you thought?"

"I thought that if only you would read your Herbert Spencer you would not be saying that science could not account to you for altruism."

" Really, Sir James ! But what does Herbert Spencer say ? Will you not tell us ? "

There was a limpid ingenuousness about Launceston's way of asking the question which must have roused the suspicion of any less simple man ; but Sir James took him perfectly seriously, and said : " I cannot give you Herbert Spencer's words, but I can put very shortly the scientific view for which he stands. The love of the fellow being, which results in altruistic conduct, is evolved from the love of the mate and of the child."

" You mean that man was first narrowly individualistic and egotistic, and that as he gained in intellectual enlightenment he naturally evolved a larger altruism."

" Just so—I think you will agree."

" I agree entirely, Sir James," said Launceston, " entirely, except in two particulars."

" And what are they, if I may ask ? "

" The first is, that I think your premises are entirely wrong, and the second is, that even if I could grant the premises I do not think that the conclusion follows from them."

" Eh, eh, eh," the old Scot gasped. He looked at Launceston a moment fixedly, and then said, " Man, I think you must be mad."

" Very likely ; I'm sure I've got enough to make me," Launceston rejoined, with a look at Macadam which seemed to intimate that the very existence of the eminent geologist would suffice to explain and almost justify insanity in all condemned to have dealings with him. " The premises are wrong, because it is becoming more and more the accepted

view that man's self-consciousness was first of all a tribal, and only later an individual self-consciousness, and the conclusion does not follow from the premises, because even if man were first an individualist, and with merely natural affections, it is quite impossible to deduce any real altruism from these feelings. If you analyse them you find them to be merely natural gratifications of the ego. Man finds no *natural gratification* whatever in any act of altruism which has the character of self-sacrifice. A gratification he does find, but it has not its source in anything that is commonly understood as human nature. Therein is the mystery."

"Again I say—explain," Pershore put in, as Sir James made no reply.

"Well," said Launceston, "I have explained, have I not? I will try to put it a little more fully if you like, but it practically all lies in what I have just said. The way in which it seems most easy and natural for us to suppose that things happened is to imagine that the individual interest was gradually merged in the family connection, and the family in the tribe. Unfortunately that simple and alluring process is not that which the evidence at our disposal supports. The evidence, on the contrary, tends to show us the primitive idea of kinship to be one of the blood tie purely. The family idea is a later conception, probably a conception of more settled times. At first we find the husband and wife regarded as by no means necessarily of the same kin: in some cases, as when exogamy was the custom, necessarily of alien kin.

"The idea that most people have is of a gradual

development of such altruistic virtues as patriotism, sacrifice of self for country, for example, out of a primitive all-absorbing egoism and individualism. It would not be correct to say that the truth, so far as we are able to ascertain it, is the exact opposite of this, but assuredly the opposite is the nearer, of the two extremes, to the historical truth. The idea of the personality of the individual is so very familiar and present to us of this century that it is exceedingly difficult for us to realise, what almost certainly is the true fact, that in the dim dawn of consciousness man had a far clearer notion of a tribal, than of an individual, personality. It is likely that he regarded his tribe, his kin, as the unit—the unit that mattered; and this is really what we mean by personality. It is in this sense that Professor Robertson Smith writes of ‘the infancy of mankind, the period of human history in which individuality went for nothing, and all common influences had a force which we moderns can with difficulty conceive.’

“He refers here to ‘the infancy of mankind,’ but what he really means to imply by that phrase is the earliest period of which ‘human history’ tells us anything. We have to carry back our imagination considerably farther from that earliest dawn of history than most of us suppose, to arrive, even in speculation, at man’s true ‘infancy.’

“But, arguing of that unknown from what we more or less do know, it is reasonable to assume increasingly less appreciation of individual, as compared with tribal, personality the farther we go back.

“ All of which is as much as to say that man was altruist before he was egoist. And as man's reason developed and his consciousness of the personal ego grew stronger and more clear, his egoism would be apt to increase at the expense of his altruism ; for reason, as we saw, supplies no purely altruistic motives. It supplies such motives as those which have for their content the intelligent recognition of the fact that sacrifice of self for the community is a condition of the community's survival, and therewith of the individual who is a member of that community ; but this is manifestly only egoism in an altruistic garb. The root of the motive here is just as egoistic as that which impels the individual to seek his own safety and comfort and let the community look after itself—only, it is a more intelligent and a farther-seeing motive. From the moral point of view there is no difference.

“ When, and in so far as, altruism is an end in itself, it is surely obvious, in spite of Herbert Spencer and Sir James Macadam, that it is not the reason of man which furnishes him with that end, and, therewith, with his highest motives. There is a very common confusion of ideas about it. Reason is regarded with such immense veneration, spoken of with such epithets as ‘glorious,’ ‘majestic,’ and what not, tacked to it, that man has come to conceive of his intellect as providing him with the highest impulses to action of which his nature is capable. The truth is almost diametrically opposite. Reason does not supply us with a single purely unselfish motive. Man, when he became

man, found himself a member of a community—found himself a creature of custom, habit, and tradition. His reason often suggested to him actions (self-regarding) opposed to those traditions. It reinforced the selfish, sensual motives. But his reason also taught him that, if he was to survive, it was important for him to postpone the personal motives to the social ones. All her arguments tend towards self-regarding actions. She has no sanctions to give for any consideration to others, to our nation, our community, our children—unless it be on the call of such enlightened selfishness as might lead a man to educate his children well so that they should help him in his old age, or to assist his country so that he should not fall into the hands of the enemy. But in such action there is no real unselfishness : it is only that the view has been amplified and extended by reason's operation. Nietzsche's argument is really a perfectly logical one on his premiss, and if, as he contends, we are to be obedient disciples of the pure reason it must logically lead us to that most ridiculous creature that any distraught brain ever conceived, the megalomaniac whom he styles 'super-man.' ”

Sir James Macadam had been sitting in a kind of crushed silence since Launceston's last attack upon his position, but now he found courage to ask :

“ If it is not the reason of man that has led him to an enlightened altruism, will you be good enough to tell us what it is ? ”

“ I will, Sir James,” Launceston replied, with unusual courtesy. “ I am aware that your opinion

of me is not a high one as it is. It will be greatly lower still when you hear my answer. Every truly altruistic sentiment, as distinct from those which can be ascribed to an extended egoism, which a man finds within him, comes to him, in my opinion, directly from the Spirit of God. There—is not that a childish confession to make?—is not that a return to the out-worn fetish, to the vain superstition, that our fathers used to worship? ”

Macadam's only reply was to shake his head sadly, as it might be in despair of a world, or of a man, for whom such a view was possible. Launceston would not let him rest, however.

“ You may not understand it, Sir James, but it does not seem to me impossible that an opinion may be correct just because our forefathers happened to share it.”

The old man was tempted from his silence.

“ Subvairsive,” he murmured, repeating his favourite criticism, “ subvairsive and retrogressive.”

I looked for Launceston to fall upon him and rend him after his manner, but he showed a rare patience, slightly shrugging his lean shoulders. Something he murmured of “ An ancient fossil!—as well argue with a block of granite,” and was silent.

It was Pershore again who took the word.

“ I think you owe us something, Launceston. You have said too much not to tell us more. You must not leave it at that.”

“ I do not wish to. If you can bear to listen on yet another Thursday I should like to explain my meaning, so far as I can. It may suggest a

thought to you, though you may not be able to agree with it. It means either very much, or nothing. I don't know which way you will take it."

"Give us the chance, at least," Pershore said; and I think all present, with the exception of Macadam, endorsed him.

Accordingly, on our following debate night, Launceston opened with an address on what he called Human Spirituality. I do not think that he had ever addressed us at such length before, and I am sure that he had never spoken, or rather, read (for he had been at the pains to write his thoughts out *verbatim*) with such conviction and earnestness. Of Launceston, the cynic, there was no trace at all that night. I think that for once he was giving us his true self.

CHAPTER XII

HUMAN SPIRITUALITY

"I HAVE already," Launceston said, "stated to one or two of you my personal conviction that altruism, the true altruism which is not merely an enlightened and extended egoism, comes to men directly from and by the Spirit of God. That is a proposition with which you will, I think, have little difficulty in agreeing if you are once able to believe the more general proposition that man really does, or may, thus commune and share directly with the Spirit of God. It could be of very little value to you if I were merely to affirm my own belief in such communion. To carry any conviction to your minds I must draw from far higher sources. Therefore the address with which I will open your debate to-night will consist in the main of citations from some such sources. My own contribution will amount to not much more than a few remarks thrown in for the linking of the cited passages. Very fortunately for my purpose we shall find the high authorities in a rare agreement. But first it is necessary to make clear, or at least as clear as the nature of the subject will allow, the sense which I would attach to the 'spirituality' of which I wish to speak to you, for the word has been used so variously that without

some such preface its meaning must be utterly vague.

“An acute hint of the difficulty is given by Sir W. Barrett’s attempted sharp distinction between the spiritual ‘order,’ as he calls it, and the psychical.¹ He insists on the distinction, and very rightly, yet it is a distinction which even his own writings prove to be exceedingly difficult to sustain. Thus, he would not deny that spiritualism and the spiritual order form special part of the province of investigation of the Psychical Research Society. The term here, as always, requires careful guarding.

“Professor Münsterberg, in *The Eternal Values*, has a trenchant comment on the two senses in which the very term ‘psychology’ itself has been used and on the errors which have arisen from a lack of sufficient discrimination between them: ‘the casual psychology, which considers all inner experiences as material for description and explanation,’ and ‘another kind of psychology, which some like to call voluntaristic psychology, which interprets the meaning of the self and follows up the inner with relations. There is no harm,’ he adds, ‘in the double use of the word so long as in this way the two methods are cleanly and clearly separated. A danger for intellectual straightforwardness sets in when both are carelessly mixed, as often happens.’²

“What I mean, then, by spirituality is man’s faculty, capable of conscious exercise, of putting

¹ *On the Threshold of the Unseen*, p. 19, by Sir W. Barrett, F.R.S. Kegan Paul, 1917.

² *The Eternal Values*, p. 17, by Prof. Münsterberg. Constable.

himself into communication with influences which do not seem to come to him by way of his reason or by any of the recognised nerve channels.

“ By what channels they do enter we cannot, in the present state of our knowledge, determine. There is no need to distrust the reality of the communications, nor to believe that they are a product of self-suggestion, just because their way of entry is unknown. We are as yet, as we may suppose, enjoying only the dawn, hardly more than the first twilight, of this spiritual faculty. We may be very certain that there was a time when humanity was much in the same position relatively to intellectuality, that it is now in regard to spirituality. The reason of man was no more than a light dimly dawning over the hills. And just as it happened then to a few more advanced than their fellows to catch the rays of that dawning sun of intellect, so it is now that comparatively few are yet conscious of the beams of this later dawning sun of spirituality.

“ But let me be clearly understood—when I say that this is a late, a recent dawn, I do not wish to imply that it is only within the last few years, when we have begun to call ourselves ‘ psychic,’ that this spiritual faculty has been developed. Our psychological idea must be strange indeed if we would deny the name of ‘ psychic’ to such persons as Plato, Plotinus, St. Paul, St. John, to say nothing of the Oriental theosophists. But all this is, relatively, a very modern story. The discovery of Neanderthal burying-places has shown us that some species of man as long ago as fifty thousand

years was burying with its dead a provision for the soul's journey to the other land. I do not mean to cite this as any witness that man, at this comparatively remote period, had caught any of the beams of the sun of spirituality. I can remember Mr. Andrew Lang beginning his course of Gifford Lectures at St. Andrews University with the words, 'Once it began to thunder, and man began to wonder.' Out of his speculations, perhaps out of his dreams,¹ man may have deduced a life of the soul after terrestrial death. This is an entirely different matter from any such consciousness of spiritual influence as I am writing of, and perhaps was long precedent, in the course of human progress, to anything of the kind.

"The point, in development, or evolution, at which spirituality, in the sense which I am claiming for it, first entered into the stock of the human faculties, is quite impossible even to conjecture. An approximate date of a million years ago is that at which it is estimated that the dawn of intellectuality gave the creature which caught its gleam a fair claim to be called man. Even should it please us to imagine the first twilight of spirituality as far back as that date of fifty thousand years ago at which we have detected man burying the viaticum with his dead, even so we make it but a very modern thing in the comparison—a possession of but fifty thousand years in comparison with one of a thousand thousand—in the ratio of 1 to 20. And seeing how slender a portion some of humanity can claim even to-day in that far older

¹ Vide *Origin of Civilisation*, by Sir J. Lubbock, 5th ed., p. 220.

intellectual heritage, it is surely no great wonder that only a few have acquired any part in this so much later gift.

“Unfortunately, to talk of spirituality to those who have experienced nothing of it is to speak in an unknown tongue. We have to explain, to make our poor effort at explanation, in intellectual terms: and we are speaking of that which is not at all intellectual but really different—if one thing ever can truly be said to be thus different from another—in very kind.

“Spirituality, in this sense, is an entirely different matter, too, from an intellectual belief, even of the deepest conviction, in a Deity who hears and answers prayers. It is not an affair of the intellect at all. And, again, it is also quite different from any ecstatic or trance-like state or from that imagined inspiration of the theurgic mystic by which he believes that essential truths are revealed to his knowledge. On the other hand, it seems to be identical with what I take to be the only sane meaning of mysticism—a felt influence, an ‘in-flowing’ through channels other than those of sense or reason. There is, indeed, a certain school of the mystics who would claim that we have, in this divine intercourse, the last word, and the completed word: that there will be no more for us to know, even after death. I think, however, that we may reasonably hope for a far richer fulfilment than it is designed that we shall ever attain in the terrestrial life.

“Of course I know,” said Launceston, looking up from his paper at this point, for he had been

reading from typed pages, "I know," he said, glaring at us and directing a glance of particular malignancy at the far corner in which Sir James Macadam had settled himself, "I know that I have spoken a word now which arouses all your suspicions—mysticism, something dreamy, vague, a thing of ecstasy and trances and the vision of the soft-headed. I tell you, on the contrary, that mysticism is the creed and the practice of the hard-headed, the practical, the men and women of the world who have done something in and for the world. It is the creed and practice of St. Bernard, St. Teresa, General Gordon, Florence Nightingale—and a multitude more of strenuous and vigorous workers. Of your ecstasies St. Teresa herself writes with a hearty contempt : ' I call it nonsense,' and adds that it is a waste of time and injurious to health. I am not speaking of any affairs of ecstasies or dreams when I say mysticism. I am speaking of that communion of the spirit of man with God which is, as Dean Inge says, ' an absolutely certain fact of experience which needs no philosophical argument and no historical proof.'

"What is soft-headed and utter nonsense is to suppose that you are intended to go through life without getting help from non-terrestrial, spiritual forces.

"That spiritual influences do exist—influent, or flowing in, somehow—is really an assumption implicit in Theism, in Theism in the full sense : in the sense that not only is there a God, but that He is ' God who is interested in His creation, who does not reside entirely aloof from it, has not merely

"set it going," to enjoy the spectacle, taking no further hand in the direction.' There are perhaps these two senses in which it is possible to understand Theism. What is not easy to comprehend is the position of the man who will deny God altogether—the dogmatic atheist, as he has been called. The ancient argument from design, made most familiar to us by Paley, seems to be good enough for his gainsaying.

"To what end the design may be working is another question, but, no matter what our answer be to that, to most of us it will surely seem that it is only the fool who has said in his heart 'There is no God,' in the sense of denying some first cause—a first cause, moreover, endowed, according to our human judgment and measure, with what we call intelligence. In the face of all the 'evidences'—to cite Paley's title—that are about us, such denial appears scarcely rational. Science, modern science, is, so far, theist.

"Professor Aliotta, of Padua University, in a book translated into English under the title of *The Idealistic Reaction against Science*, makes some penetrating and illuminating comments very much to the present purpose. He, be it noted, discusses the 'evidence' (in the widest sense) from the scientist's point of view.

"'Excluding absolute idealism and absolute monism,' he writes, 'there is but one way of explaining the essential relation which must exist between nature and the mind of man in order to make knowledge possible and to justify its value: we must posit between the two terms a link of an ideal order

in an Absolute Consciousness to which both are present as successive phases of the realisation of an eternal design of that Consciousness. We do not then consider mind as being statically identical with nature, as realistic monism does, since their unity does not lie in the real substance, but rather in a process of which the various moments find their ideal synthesis in the end which unifies them. If this ideal synthesis can only be understood if an Absolute Thought be postulated, it is obvious that faith in God is the necessary outcome of faith in the objective value of science.’¹

“ And again, on page 465, he tells us :

“ ‘ He who doubts the evidence of God must doubt the objective value of his cognition. We seek the deepest reasons for faith not in some blind feeling, nor yet in an illogical will to believe at all costs, but in those very rational motives which lie at the root of the exigencies of science. The scientific man who sets himself to understand nature manifests his faith in the rationality of the world by the very act of turning to Him in the yearning of his soul, and works all unknowingly for the glory of God, even though he may call himself a materialist. The voice of the Eternal speaks to his reluctant mind through sensible appearances; he is the unconscious priest of an undying religion, that faith whose temple is the universe and whose inexhaustible revelations will be found in the inmost depths of the mind. God is thus brought before us as the necessary basis of the possibility

¹ *Idealistic Reaction against Science*, p. 463, by Professor Aliotta, translated by Agnes McCaskill. Macmillan & Co., 1914.

of knowledge: the criticism of pure reason itself leads to Him even apart from the exigencies of moral life.'

"M. Boutroux expresses almost exactly the same thought, writing: 'Religion must no longer be presented as an arbitrary conception, tolerated theoretically, perhaps, by science, but unconnected with her; science even seeks her, without knowing it.'¹

"And again, on the very next page:

" 'Radical heterogeneity' (between religion and science) 'is impossible, since, if God exists, He is the cause of the world which, by reason of its laws, is the object of scientific study, and between cause and effect there cannot fail to be some relation.'

"But notice that all this, excellent as it is, is something quite different from the question of religion. As Bender says: 'Not the question about God, and not the inquiry into the origin and purpose of the world is religion, but the question about Man. All religious views of life are anthropocentric.' This quotation is from his *Wesen der Religion*, page 85, cited by Professor James in the *Varieties of Religious Experience*."

"Theism surely has to mean for us a great deal more than the mere existence of God. If it is to imply a God who, humanly speaking, 'matters'—who is one to be of any importance for the life of man, still more if He is to be an object of man's worship—then He must be a directing, a sympha-

¹ *Science and Religion in Contemporary Philosophy*, p. 273, by Émile Boutroux, translated by J. Nield. Duckworth & Co., 1909.

² Page 507, note.

thising, a helping God. Once we are in touch with such a God as this, then indeed we can say, be our creed what it may, that religion has become a reality for us.

“ But how are we to come into such touch ? How have men done so ? How are they doing so ? That is surely the great question for Theism in its wider sense. The question of Theism in the more narrow sense—whether there be a God at all, a consciousness other and immensely larger than our own, in the universe—is hardly in need of further argument.

“ I will pass, then, to consider how, if at all, man comes into communion with this other and immeasurably more effective consciousness.

“ Does he come into communion with it ? Logically, that is the first part of the question to which we should try to find an answer. We should perhaps seek the answer first among the philosophers. That is a better way than going directly to the saints. Theirs is evidence which might be suspect of bias. We may bring it into the case by way of confirmation, at a later point, before we give the verdict.

“ I would quote a further passage or two from Professor Aliotta's book, cited above, but I would give the quotations with a caution which I will mention almost immediately.

“ ‘ In order,’ he writes, ‘ to give the mind the right to project its forms into the spiritual world, it will suffice to suppose human consciousness to be the end towards which the becoming of things tends. Nature, when thus regarded as a means to the

advent of the spiritual life, will find therein the profound revelation of its true being.'¹

"They are very striking words, and he is so convinced of their worth that he almost repeats them on page 426 : ' Give nature,' he there says, ' its value and concrete meaning as an instrument of spiritual life, and the spectre of the unknowable will vanish.'

"Not only so, but, he might have added, all creation at once becomes logical. I do not, however, wish to push the testimony of these passages further than is legitimate. The words ' spiritual life ' are thus translated from the Italian, and I do not gather that their meaning is precisely, in Professor Aliotta's sense, that which I have proposed to attach to spirituality. His 'vita spirituale' has, as I take it, more of the intellectual content than we understand in its English literal translation. That is the ' caution ' which I spoke of above, and I will ask you, still bearing it in mind, to consider further the following words, with which the Italian Professor brings his very remarkable book to a close.

" ' Reality can only be known through the medium of the forms of the mind. Knowing this, we do not hesitate to conceive all the other centres of active spontaneity, and the common principle from which their existence is derived, as modelled on our spiritual substance in its most living and concrete aspects.

" ' This principle is for us an Absolute Self-conscious Personality, which is, like our mind,

¹ *Idealistic Reaction against Science*, p. 424.

Volition, Thought, and Imagination in one indivisible whole, an Ego, which is not motionless and shut up in an abstract identity, but eternally renews itself in its inexhaustible life. Creative activity is its essence; just as it is the essence of our mind, which experiences it in itself, and has therefore concrete cognition of it; it is no obscure mystery, no incomprehensible dogma, but rather something which is revealed to us in the continual evolution of universal reality and our own consciousness. The question "Why has God created the world?" is then meaningless to us who are incapable of conceiving a Mind which is not fruitful and active spontaneity. The work of creation is as eternal as that Consciousness which manifests its abundant life in that work. The lot of the theistic conception is not indissolubly bound up with that of a beginning of the cosmic process in time, since it is possible to reach the Personal God, even if we conceded no eternity to the world. The work of creation has no end, just as it had no beginning: we behold its accomplishment with our own eyes in everything which lives and is subject to change, in the opening flower, the sprouting seed, and the glowing dawn in the heavens.'

"Those are splendid words, even in the translated form, and so far as they reach are as true as they are glowing; but, after all, Aliotta's concern is mainly with epistemology—dreadful word! That is to say, with the mode in which intellectual knowledge is humanly possible. He scarcely touches that warmer, more intimate Theism which consists largely in the sense of a presence, and

a communion with that presence, that are morally and spiritually uplifting and comforting. The most incisive and clear-sighted account that I know of Theism in this truly religious sense is furnished by M. Boutroux in his work from which I have briefly quoted above, *Science and Religion in Contemporary Philosophy*. Again and again he tries his hand at a definitive or descriptive account of religion :|

“ ‘ Religion would appear to be essentially that connecting link between the relative and that Absolute—Infinite and Perfect—which Herbert Spencer conceived.’ This might have been written by Aliotta. But lower on the same page (119 of the English translation) he goes further : ‘ Religion is the secret consciousness of the reality of life, i.e. of the soul, and its connection with those beings which, as perceived by our understanding, seem to impinge on each other mechanically, like the atoms of Democritus.’

“ Again (p. 203) : ‘ Religion is just that inward, subjective content of consciousness which scientific psychology thrusts aside in order to attend solely to the objective phenomena that are concomitant.’

“ And, previously (p. 197), we find : ‘ It is so far as they ignore or reject the scientific explicability of the elements of religion that men are religious.’

“ We seem to be travelling, here, rather far from Aliotta, whose whole gist is that the idealistic reaction of the intuitionists against science has been carried to an extreme which sometimes reaches absurdity. Nevertheless, Boutroux him-

self remarks elsewhere (p. 234) that there is no use in protesting that the act of faith, prayer, and the sense of union with God 'are to be regarded as entirely spiritual and as in no way related to material things. Just because they fall within consciousness they are amenable to science,' and so on. Boutroux, in fact, comes back to the view in which we must surely agree, the view which Poincaré puts so aptly, and which is quoted approvingly by Aliotta, that 'reason is still the eye.' Howsoever the religious consciousness, the sense of communion, spirituality, or whatever we please to call it, comes to us, once having come as a state of consciousness it is, as such, immediately and obviously an object of philosophical observation.

" And, as I asked you to listen to the last words of Professor Aliotta's book, so now I will quote some concluding passages of this of M. Boutroux :

" ' We should make religion an incomplete and still abstract idea if we were to confine it to beliefs and practices. Just as it starts from feeling, so it ends therein ; for the object of dogmas and rites is both to express feeling and to determine it. The development of feeling is like a circle which only recedes from its starting-point in order to return thereto. It is not without significance that the psychologist and the moralist consider mysticism an essential element, and, perhaps, the foundation of religion. All intense religious life is mystical, and mysticism is the life-source from which religions, threatened by a formal and scholastic spirit, derive fresh vigour.

" ' But there is an abstract and barren form of

mysticism as well as a positive and fruitful form. The first is that which endeavours to live entirely by feeling, believing itself freed from the tyranny of dogmas and practices. In isolating itself from the intellect and from activity, feeling is not raised; it becomes enfeebled. On the other hand, guided and enriched by thought and by action, feeling may, indeed, expand and display its creative property; it is then the active mysticism, so incomparably efficacious, which we find at the heart of all the great religious, moral, political, and social movements of humanity.’¹

“ We have it all, and, briefly stated, there—his full conception: ‘ As religion starts from feeling, so it ends therein ’—its source emotional but its contents to be checked, to be affirmed, or rejected, by the intellect. That, in few words, I believe to be fair statement of M. Boutroux’ position, and it is a statement which seems to be endorsed by Professor Aliotta in that final chapter, which he entitles, ‘ The Spiritualistic Conception of the Universe.’

“ M. Boutroux, as I conceive, is largely in accord with Professor James, to whose *Varieties of Religious Experience* he devotes a chapter. Especially he discusses sympathetically James’s attitude towards the mystics. Could one indeed do otherwise who can write that ‘ feeling ’ is both the Alpha and the Omega of the religious alphabet—though there be many letters, standing for rigid intellectual study, between ?

¹ *Science and Religion*, by M. Boutroux, translated by J. Nield, 1909.

“Insistently, in any inquiry of this kind, Professor James demands attention. In those most engrossing Gifford Lectures he not only passes in review the most striking and typical varieties of religious experience, but adds, what is of particular value, his personal view. So far as one may gather he does not rank himself among the mystics, but none the less gives his unmistakable verdict that it is in mysticism that real religion has its very source.

“It is needful to put in a word of caution here. Men have meant very different things by this word ‘mysticism.’ I find that some Christian churchmen use ‘mystical’ in the sense of having to do with the sacraments—the ‘mysteries.’ That is one of the dictionary’s meanings of the word, but it is not the sense in which James employs it, and it seems to me a pity to employ it so, because there is something quite different which it may be taken to suggest more usefully; and that is the religious ‘feeling,’ the feeling of communion with something which is not an ordinary object of sense.

“In its extreme activity it may be this same feeling which works itself out into the states of trance or ecstasy. We should hesitate, perhaps, to call these states morbid or psycho-pathic. They have played an important part in the consciousness of some who have done the greatest and most practical work in the world. They have been of the first assistance to those specially constituted persons in the achievement of their tasks. But undoubtedly they are exceptional, not normal; and probably for every one person who has enjoyed or suffered experiences of the kind there are

hundreds who have been conscious, without passing into any psychic state of very unusual character, of a feeling of communion with, or of invasion by, influences which do not seem to enter by the ordinary nerve channels.

“Doubtless that is an extremely colourless way of stating this experience, but for the moment I am trying to put it in the most general form possible in order to include the greatest possible number of instances.

“The lecture in which Professor James gives the verdict which seems to me of most value for our present purpose is that which he heads ‘Philosophy,’ immediately following the lecture on mysticism. ‘In a world in which no religious feeling had ever existed,’ he writes (we are here in touch with the religious feeling so strongly insisted on later by Boutroux), ‘I doubt whether any philosophic theology could ever have been framed. I doubt if dispassionate intellectual contemplation of the universe, apart from inner unhappiness and need of deliverance on the one hand and emotional mysticism on the other, would ever have resulted in religious philosophies such as we now possess.’¹

“You see, again it is emotion, feeling, that is the starting-point.

“But again, he, like Boutroux, though he puts feeling in the place of the Alpha in the alphabet of religion—I am less certain whether he would give it the place of the Omega also—vindicates the proper rights of the intellect. ‘Feeling,’ he

¹ *Varieties of Religious Experience*, p. 431.

writes (p. 432), 'is private and dumb, and unable to give an account of itself. It allows that its results are mysteries and enigmas, declines to justify them rationally, and on occasion is willing that they should even pass for paradoxical and absurd. Philosophy takes just the opposite attitude. Her aspiration is to reclaim from mystery and paradox whatever territory she touches. . . . To redeem religion from unwholesome privacy, and to give public status and universal right of way to its deliverances, has been reason's task.' We may compare with this, on the 'dumbness' of 'feeling,' Professor Edward Caird's remark, in his *Evolution of Theology in the Greek Philosophers*, vol. ii, p. 226. Discussing Plotinus, he writes: 'The inmost experience of our being is an experience which can never be uttered.'

"In giving some kind of expression to the impression of feeling, James maintains (and probably we shall be in agreement with him) lies the intellect's proper sphere in religion. 'The intellectualism in religion which I wish to discredit,' he adds, on the following page, 'pretends to be something altogether different from this. It assumes to construct religious objects out of the resources of logical reason alone, or of logical reason drawing rigorous inference from non-subjective facts. It calls its conclusions dogmatic theology, or philosophy of the absolute, as the case may be; it does not call them science of religions. It reaches them in an *a priori* way and warrants their veracity.' From the manner of this statement it might seem as if the writer put this warrant of veracity, here claimed for the intel-

lectual conclusion, into a sharp contrast with the situation in which the feeling of religion left its results. But this, on his own testimony, is by no means the fact. Of course, the warrant of logic is different in kind, but the warrant of feeling is forcible enough in its own kind—and, James would add, for those who experience it, far more intimate, real, and valid.

“ He sums up the warrant that it gives, and its limitation under three heads : ‘ (1) Mystical states, when well developed, usually are, and have the right to be, absolutely authoritative over the individual to whom they come. (2) No authority emanates from them which should make it a duty for those who stand outside of them to accept their revelations uncritically.’ ¹

“ Herein, as is obvious, the warrant differs from the intellectual warrant which claims universal assent. But, under the third head, James indicates a measure which seems to be set even to the intellectual warrant by the mystical states themselves :

“ ‘ They break down the authority of the non-mystical or rationalistic consciousness, based upon the understanding and the senses alone. They show it to be only one kind of consciousness. They open out the possibility of other orders of truth, in which, so far as anything in us vitally responds to them, we may freely continue to have faith.’

“ Taking these heads, one by one, as his texts, he proceeds to debate them in the following pages most interestingly at a length to which we cannot go with him here. One sentence we may notice in

¹ *Varieties of Religious Experience*, pp. 422-3.

his discussion of the second of the three heads : ' To come from thence ' (i.e. from the source to which these mystical states owe their being) ' is no infallible credential. What comes must be sifted and tested, and run the gauntlet of confrontation, with the total context of experience, just like what comes from the outer world itself. Its value must be ascertained by empirical methods, so long as we are not mystics ourselves.'

" Professor James's pragmatism is well known. It is by their fruits, mainly, that he would value such mystical experiences. How they ' work ' is for him the supreme test, as, in effect, it seems to be for Eucken and the modern German school of his type. But even here again, he would concede, I think, that for other minds there may be other than this practical and utilitarian measure of value, which for them are as valid as this measure is for him. I presume he might be willing to accept the designation of a pragmatist for himself, but not of one who elevated pragmatism to a dogma for others.

" His study of the whole question of religion is a wonderful testimony to his serenity and liberality of judgment. In no sense a mystic himself, quite unable, as it seems, to share in the feeling of any influence coming from ' the subliminal,' whence, he conjectures, it permeates into consciousness, he is still capable of appreciating its truth and its value so highly as to be able to write that ' personal religious experience has its root and centre in mystical states of consciousness ' (p. 379). His admirable summation, in the concluding lecture,

of the results investigated in those which have preceded it, is really no more than an expansion of this brief comment.

“ ‘ Summing up,’ he writes, on page 485, ‘ in the broadest possible way the characteristics of the religious life, as we have found them, it includes the following beliefs :

“ ‘ 1. That the visible world is a part of a more spiritual universe from which it draws its chief significance ;

“ ‘ 2. That union or harmonious relation with that higher universe is our true end ;

“ ‘ 3. That prayer or inner communion with the spirit thereof—be that spirit “ God ” or “ law ”—is a process wherein work is really done, and spiritual energy flows in and produces effects, psychological or material, within the phenomenal world.

“ ‘ Religion also includes the following psychological characteristics :

“ ‘ 4. A new zest which adds itself like a gift to life, and takes the form either of lyrical enchantment or of appeal to earnestness and heroism.

“ ‘ 5. An assurance of safety and a temper of peace, and, in relation to others, a preponderance of loving affections.’

“ But I take it that of all the modern philosophers he who conceives himself to have the most helpful gospel to preach to us is Eucken. Eucken, as I understand, would disclaim for himself the title of mystic ; but then, that is only because he means by the term ‘ mysticism ’ much that most of the mystics themselves are careful to exclude from it. Eucken’s is essentially an active system, a system that does

work, that affects human life and claims to give it a fresh spiritual impulse. Therein it touches mysticism in its most vital sense, and therein also it detaches and distinguishes itself from mysticism of the passive kind, the purely contemplative. But this pure passivity is disavowed by the majority and, as we must surely think, by the best, of the mystics themselves. The true mysticism is a powerful inspiration to activity not only in the spiritual and intellectual but also in the social, moral, and practical spheres.

“Philosophy has so very largely cut itself away from any idea of practical guidance of life that we hardly expect of a philosopher that he shall come to us with any gospel, any message of hope and help. It is almost startling to find Eucken assuming, as he assuredly does, such an attitude. We have grown accustomed perhaps to regard philosophy as an intellectual concern merely, an explanation rather than an aid to life. It is true that the ‘I ought’ of Kant is a moral maxim which may be set in opposition to the intellectual ‘I think’ of Descartes, but the Kantian morality for its own sake makes but a chilly appeal to the heart of man. It hardly fires him. Eucken, harnessing the moral to the spiritual, gives a motive force to the moral at the same time as he enriches, immensely, human life, which he shows to have been impoverished almost to bankruptcy by its preponderant attention to things material and intellectual. As he himself says, in that book which I suppose to contain the ripest product as well as the fullest expression of his thought, *Life's Basis*

and Life's Ideals—to give it the title of its English translation—‘the chief aim of this investigation is to reveal and to call forth life; it is not its chief aim to interpret life in conceptual terms.’¹

“And this aim is to be attained only by a relative detachment from things of sense and intellect. Thought is not to be concentrated on effects (p. 56). Care for the soul is impossible while a man is occupied in striving for results (p. 61). And he perceives the special danger in the conditions of modern industrial life, that a man is liable to be fitted into place, as a piece in the machine, and thus lose his real personality, his soul. This point is insisted on in pp. 45, 85, 89 and elsewhere. And this is the worst loss that can befall man: ‘Not suffering, but spiritual desolation is man’s worst enemy’ (p. xv in the Introduction).

“Surely it is not for one who can write thus to disclaim for himself a place with the highest of the mystics. His idea of mysticism, however, was plainly not taken from those whom we should regard as the best examples. He is aware (p. 246) that his own view involves ‘an approximation to mysticism.’ But, he adds, we need it ‘in a new form. . . . The older mysticism was the offspring of a worn-out age, which primarily reflected upon quietness and peace, . . . and so, to be merged in the formless infinite would be regarded as the culmination of life. As the spiritual life is to us, on the contrary, an increasing activity and creation, a world of self-determining activity, so its

¹ *Life's Basis and Life's Ideals*, p. 108, by R. Euken, translated by Alban G. Widgery. A. and C. Black, 1912.

being called to life at individual points is a rousing of life to its highest energy. . . . One may or may not call this mysticism ; in any case mysticism of such a kind cannot be charged with that which now appears to us to be defect or error in the older kind.'

" Shall we not, therefore, agree with Eucken, grant him full permission to describe mysticism, in its best sense, in just such terms of activism as he admits of one of its kinds here, and in the spirit of that mutual agreement hail him to the mystic ranks ?

" I think that we may so rank him, and further, I would quote his words as to the origin of the spiritual life—the dawn, as I have called it, of spirituality : ' A new life,' he writes (p. 136), ' distinct from that of nature, arises in our soul. With a great diversity of manifestation it surrounds us with an indisputable actuality ; no one can fail to recognise that something of importance, something distinctive comes to pass in us. But as soon as we try to comprehend these manifestations as a whole, and to ascertain the meaning of the whole, a difficult problem arises. It is comparatively easy, however, to come to an understanding as to the negative aspect of the matter. It is obvious that the new life is not an embellishment or a continuation of nature ; it would bring with it something essentially new. Again, it is obvious that it is not a product of a single psychological function, such as thought or feeling ; it would form a whole transcending the psychical functions, and from this whole determine the form of each function dis-

tinatively. But what is this new reality and this whole to which the course of the movement trends ? The more we reflect over the question, the more strongly we feel that it is a direction rather than a conclusion that is offered us in this matter ; something higher, something inward, and so on is to evolve, but what is embedded in the inward and in what this supremacy is based is at present not apparent. Further, every attempt at a more definite orientation at once reveals to us a wide gulf, indeed, a harsh contradiction, between the content of that which is sought and the form of existence from which it is sought. The chief impulse of the spiritual life is that it wills to liberate us from the merely human ; to give us a share in the life of the whole ; to remove us from a happening between things to their fundamental happening. Seen from within, the history of humanity is primarily an increasing deliverance of life from bondage to the narrowly human, an emergence of something more than human, and an attempt to shape our life from the point of view of this : it is an increasing conflict of man with himself. At the same time, however, it is a taking up of the whole into himself ’ . . . and so on.

“ Eucken pursues all his theses to their remotest corners with a national thoroughness and perseverance.

“ Elsewhere (p. 152) he speaks of the ‘ relation . . . of man to the spiritual world, which is immanent in him, and at the same time transcends him.’ And it would appear that he regards both this immanence and this transcendence as existing long

before man came to any consciousness of them, for he writes (p. 170) of 'the union of the spiritual life with man' as 'something old in so far as it must have been existent and in some way effective from the beginning, something new in so far as its distinct emergence and its transition to a state of self-activity must alter the condition of things essentially.'

"In Professor Royce's Gifford Lectures, published under the title of *The World and the Individual*, considerable space is devoted to Mysticism, but this is rather on a special use of the word, arising out of the discussion of the nature of being—of reality. Criticising the realistic hypotheses of being as involving an essential dualism, he admits that unity is to be found in the oriental conception of the absorption of the individual into the absolute self, but that unity thus achieved is so perilously like nonentity that it is difficult to accept it as giving an account of being—of which it is almost a negation. A like remark, we may remember, is put by M. Anatole France, in *Thais*, into the mouth of the philosopher Nicias. 'One wins the truth,' Professor Royce writes—on this hypothesis—'not through a cultivation of what we ordinarily call Reason, but through a quenching of Reason in the very presence of the absolute goal of all finite thought.'¹

"That is his comment on the philosophic mysticism which he is here considering. On the other hand, on the more directly religious side of

¹ *The World and the Individual*, p. 155, by Josiah Royce, Ph.D., Macmillan 1900.

mysticism he is able to say elsewhere (p. 190) of the mystic :

“ ‘ As a religious teacher he is inspiring for all, just because he appeals to our own individuality. He breathes the common spirit of all the higher religions when he conceives your goal as an inner salvation, and your search for truth as essentially a practical effort to win personal perfection. It is no wonder then that the mystics have been the spiritual counsellors of humanity.’

“ Towards the end of the course of Lectures (p. 417, 2nd Series), he sums up their general conclusion as follows : ‘ The one lesson of our entire course has thus been the lesson of the unity of finite and of infinite, of temporal dependence and of eternal significance, of the World and all its Individuals, of the One and the Many, of God and Man. Not only in spite, then, of our finite bondage, but because of what it means and implies, we are full of the presence and the freedom of God.’

“ I do not apologise,” said Launceston, “ for keeping you so long over these pronouncements of the philosophers. Had it been my own words to which I asked you to listen at such length I should be apologising with bitter shame. But so much misunderstanding prevails on this subject that I wanted to make the case strong by much testimony. There has been a suspicion about this mystic message as if it were something misty, mysterious, not for the common everyday life of man, as if it were opposed to common sense. Miss Florence Nightingale is perfectly justified in her dictum that

‘mysticism is the essence of common sense.’ What is opposed to common sense, and is, indeed, absolute common nonsense, is the idea that man is set in this world without this source of help from beyond.

“Very much more shortly I will now speak of the witness of the mystics themselves. I will first, however, cite one final passage from James’s *Varieties*, because it may serve us as an introduction to the deliverances of the saints. On page 419 he writes: ‘This overcoming of all barriers between the Individual and the Absolute is the great mystic achievement. In mystic states we both become one with the Absolute, and we become aware of our oneness. This is the everlasting and triumphant mystical tradition, hardly altered by differences of clime or creed. In Hinduism, in neo-Platonism, in Sufism, in Christian mysticism, in Whitmanism, we find the same recurring note, so that there is about mystical utterances an eternal unanimity which ought to make a critic stop and think, and which brings it about that the mystical claims have, as has been said, neither birthday nor native land. Perpetually telling of the unity of man with God, their speech antedates languages, and they do not grow old.’

“They are words singularly close in their significance to those of another preacher, who speaks from a very different platform. Dean Inge, in one of four remarkable addresses delivered in the chapel of Corpus Christi College at Cambridge and published under the title of *Speculum Animæ*, tells his hearers that: ‘Taking as my theme what is absolutely central and fundamental in religion, the

relation of man as a personal and immortal spirit to God as the personal and eternal Father of spirits, . . . whatever may be the issue of all the manifold critical, historical, ecclesiastical, political, economic problems that claim for solution and make our life so unrestful, the foundation of God standeth sure ; the things that cannot be shaken remain.' ¹

" He goes on to indicate some of the typical vexations, and then proceeds : ' But when we turn from all these perplexing problems, and think of spiritual life in its purest and simplest nature, what a difference we find ! We have interrogated the scribes and lawyers, and their witness agrees not together. On all questions about religion there is the most distressful divergency. But the saints do not contradict each other. They all tell the same story. They claim to have had glimpses of the land that is very far off, and they prove that they have been there by bringing back perfectly consistent and harmonious reports of it. There never was a greater mistake than to suppose that there is no authentic information, but only subjective fancies and hallucinations, about the spiritual world. Subjective fancies betray their subjectivity by reflecting the idiosyncrasies of their creators ; but in the higher religious experiences there is singularly little subjective distortion. You may take up mystical books written in Europe, Asia, and America two thousand years ago and last year ; by men and women ; by Catholics and Protestants ; by philosophers and unlearned,

¹ *Speculum Animæ*, pp. 3 et seq., by W. R. Inge, D.D. Longmans, 1911.

ignorant people ; and if they were all translated into modern English you would hardly be able to distinguish them.'

"These are almost the very words of Professor James. Dr. Inge appends a caution to them :

" ' I am not speaking, you will understand me, of trance or ecstasy ; I am simply speaking of prayer—prayer, of which the old and true definition is "the elevation of the mind and heart to God." It is in prayer, using the word in this extended sense, that we come into immediate contact with the things that cannot be shaken. It is when we exercise this highest of our privileges that we ascend in heart and mind to the sphere of true realities, to the world which, though unseen, is not unknown, and of the existence of which we have a far greater certainty than we can have of the world which we perceive with our senses.'

"Later in the same address he tells his hearers, ' I only want to remind you that the communion of the soul with God is an absolutely certain fact of experience, which needs no philosophical argument and no historical proof.'

" ' We have,' he says elsewhere, ' the spiritual faculty, that gift which, as Plotinus says, all possess but few use, the privilege of communion with God in prayer.'

"He confirms his own view with two quotations from William Law, author of the *Serious Call to a Devout and Holy Life*. The second and shorter is, 'The sun meets not the springing bud that stretches towards him with half that certainty as God, the

source of all good, communicates Himself to the soul that longs to partake of Him.'

"In the same sense we have Ward writing, in *The Realm of Ends*, p. 450, of 'that nascent sense of the Divine presence which constitutes the truly religious life, and converts faith into the substance of things hoped for, the evidence of things not seen.'

"It is hardly necessary, and it is hardly worth while to cull at all largely from the testimony of the saints, for the simple reason stated by Dean Inge, that it is all so faithfully to the one effect. The bulk of the testimony is immense. There is Dean Inge's own book, *Christian Mysticism*, there is Baron von Hügel's monumental story of the life of St. Catherine of Genoa, published under the title of *The Mystical Element in Religion*, there is all the literature of and about Buddhist mystics, and, finally, the personal records of the saints and mystics themselves, St. Teresa, St. John of the Cross, St. Ignatius, Joseph Boehme, William Law, Fénelon, Molinos, Brother Laurence, and a vast number besides, but all essentially to the same effect. The type of early German mysticism represented by Tauler is perhaps a little different, but rather in its content than in its mode of access. These people, as I gather, all believed that they felt something. It was a communion of which they had a consciousness, and were aware. Indeed, a communion of which they were not aware and of which they did not feel conscious would have no meaning at all. It would be non-existent—words without sense. And that all these people should be self-deceived, people of high intellectual power and

of much practical achievement, seems to me an enormous supposition—quite incredible. Thus, all the testimony combines to give a most confident affirmative answer to the question which I have proposed to you. On the assurance of overwhelming witnesses there is this other country from which influences flow into the consciousness of man, and if you will grant me this admission there is hardly need to debate the further and minor question whence man may derive those altruistic dispositions which, apart from this solution, are surely quite inexplicable. Science is theist, and the highest mysticism, which I have here called spirituality, comes as the crown and end of evolution :

“ ‘ All tended to mankind,
And, man produced, all has its end thus far :
But in completed man begins anew
A tendency to God.’

“ But now you may ask me, ‘ How is it to be attained by us, who are but common members of a workaday world, who make no claim to saintship, how are we to come within touch of these divine influences ? ’ The answer is easy. Even Eucken, not claiming himself a mystic, gives it to us as I said just now, and every avowed mystic who has written his experience for us confirms him. The soul, to receive the message, must be in quiet ; it must not be beset and absorbed by cares, by sensual longings or intellectual quests. The state is to be one of passive receptiveness.

“ The mystical writers agree in calling this a state of contemplation in contrast with the state of meditation, in which last the intellect is active.

It does not matter to which of the great mystics you go, this is always the essential condition. It makes little difference into what stages they are pleased to divide the journey of the soul along the path to the divine communion. That is no more than the reflection of the difference in their own natures and in the metaphors which have seemed to them most apt for describing the pilgrim's mystical way. Thus, the 'four steps' of St. Bernard are the equivalent of the 'seven mansions of the soul' of St. Teresa and of the 'Night of the spirit' of St. John of the Cross. This Spanish mystic, St. John, is just as emphatic as St. Teresa about the 'nonsense' of visions, auditions, and so on. He, too, regards the mystic not as the passive dreamer, withdrawn from active life, claiming that this is 'a solid and substantial doctrine, suited to all.' It is not the creed of the Quietists, you see, that these hard-headed people profess, but quite a different matter. They imagine the mystic, refreshed by his communion with the divine, coming into the active life of the world and playing a strong part in it, very much the stronger by virtue of this reinforcement. But the quiet of the soul is the condition for the conscious reception of the communion : all agree there.

"I am careful to say 'the conscious reception,' because I am quite convinced that all of us are recipients of some influence from spiritual sources, even though most of us may go through a long life without any awareness of it. You will find it a little difficult, I think, to account otherwise for the heroism and cheerful sacrifice of self being daily

done in France at this time by those who must seem to us as very brutal men.

“That, however, is only by the way. I may say this, to finish this over-long address, that though there is this consciousness among the mystics about the only right mental attitude in which to receive the consciousness of the spiritual influences, they are equally agreed that it is an attitude not easy at first to maintain. It needs a severe effort of will to stay that ceaseless questing which is the habit, and often the terrible infliction, of the intellect. There is no cause for despair, I think, if you find yourself unable, or able only for a moment at a time, to cease that quest. Despite your will, it is sure to resume its activities. But the cessation can be brought about. William James, though no mystic, but a skilled psychologist, assures us of that, and by practice it becomes more easy. Believe me—it is well worth while.”

CHAPTER XIII

MAN'S AGE ON THE EARTH

WHEN Launceston stopped members were not very ready to take up the debate. I noticed a tendency to low-voiced discussion in couples or small knots rather than to direct question or challenge.

It was Davis, as perhaps was right, he being M.P. and also one of the youngest, who at length threw the ball to Launceston.

"You group together," he said, "at least I think that was your idea, and at all events it is often done, the religious emotion with the æsthetic. My trouble is that we can understand through what senses beauty in a picture or in music makes its appeal—through the eye or the ear—but this communion, how, through what sense, do we become aware of it? Is it a sensation? If so, by what sense organ is it communicated?"

"I believe that we should do right to call it a sensation," Launceston affirmed. "I was rather shy of the word, and called it emotion more often, if I called it anything, in the paper I read, because I did not want to frighten you off what ought to be very familiar ground, but is, to most people, strange ground. But I would sooner, quite frankly call it a sensation. Then you said 'Through what organ of sense?' Well, I would admit that there is no specialised human organ, so far as we are

aware, by which the spiritual communion is made ; but then I would remind you of three facts : first, that specialised sense organs are a relatively late product of evolution. I imagine you will agree that animate things were affected by light, for instance, and noise, for countless ages before any animal had specialised eyes and ears. And these are only adapted for certain vibrations. X-rays will pierce you anywhere—not only through the eyes. I have known a deaf man enjoy music by resting his upper teeth on the edge of a piano that was being played. (No, Foljambe, my facetious friend—they were not false ; they were his own teeth and they were in his mouth as he set them upon the piano.)

“Then, secondly, I would point out to you that the tactile sense is very little specialised, or (better) localised : you can feel contact nearly all over your body. And finally, you should remember that this which we are speaking of is a communion of spirit with spirit. Is it certain, is it necessary, that, even though our spirit is linked up with our material body while we are on this planet—is it necessary that another spirit should communicate to our spirit through the material nerve channels ? My own view is that it does so—that it is through the ordinary nerve channels, though through no specialised, localised organ, that this communication comes. But though that is my view, I do not for a moment think that it is necessarily right. And you should remember that one of the great difficulties in the theory of knowledge is the connection between spirit and

matter. Now in this communion that we are speaking of, if you choose to disagree with my view, and will prefer to think that spirit communicates directly with spirit, without any material medium, why then, of course, you dodge that big difficulty altogether.

“So much for that: and now I will give you another suggestion, which may seem fantastic, because it is strange, but is not, as I think, on that account impossible. It is that although there is no specialised organ for the reception of the spiritual messages now, that is no reason why there never shall be. Who is to say that we are not even now in process of evolving it, to the end that the communication shall become increasingly more forcible and clear? Who can deny such a possibility? Science certainly cannot.”

“All things are possible,” said Davis.

Launceston turned upon him with the Berserk fury to which imbecility was apt to stir him. “That’s such a damned silly remark in this particular connection that I don’t suppose anyone who wasn’t a Member of Parliament could possibly have made it? It has not even the merit of being original in its silliness.”

“I wish you were in Parliament,” the young legislator retorted angrily. “Perhaps you’d be taught manners.”

“In Parliament! Manners! My *dear* Davis! The reception of the spiritual influence without a special sense organ for its reception is surely an extraordinarily easy supposition in comparison with that.”

A peace-loving member who seldom spoke broke in between the clashing swords.

"All these processes of evolution you have been telling us about, Launceston," he said—"it seems as if they would demand enormous periods of time."

"Let them demand," Launceston replied, largely generous. "They shall have them. That is what makes eternity such a pleasant medium to work in. You may take just as long as you like over a job, and when you have done it you find yourself with just as much time before you for the next job as you had at the start. There's a fine lot of room to make mistakes and go back on them and start again. Evolution's always doing that."

"But man is not eternal—not terrestrially eternal at all events. We find him with these ideas of spiritual communion very far back in his history: he hardly seems to have developed them much."

"Far back in his history, do we? That is just what I doubt. What is his history?"

The usually silent member was terrified. "Oh," he said, "that's a large question. I would much rather you answered it."

"I don't mind having a try, just because I think the kind of answer that most people would give is entirely wrong. I don't want to misrepresent the idea that the ordinary man has of his own history on the earth, but it seems to me to be like this: a belief that all the main points of the story, all the more important happenings in human affairs, are given us in three forms, first that of history, as it deals with what is most surely ascertained,

secondly that of tradition, as the evidence becomes more doubtful, and thirdly of legend, as the witness gradually fades into the mist and disappears. And 'away back,' behind this legendary period, people seem to figure to their minds a little space, of practically no account, in which man was hardly to be distinguished from the brute, and in which nothing occurred to him that really mattered. Virtually the whole story people seem to conceive as either (1) plainly set out in history ; or (2) dubiously reported in tradition ; or (3) suggestively fabled in legend.

" I really believe that to be the common conception. Attention has been focussed on this period of—how many years shall we allot to it ? The Egyptian dynastic record is estimated to commence about 4,500 years B.C. and there is abundant evidence of man's presence in the Nile Valley before that. Let us, then, to be fairly on the safe side, allot, in round figures, ten thousand years, which is very generous dealing, to this period covered by the threefold witness of history, tradition, and legend. And after that generous reckoning let us see, for a moment, how long it is reasonable to suppose that man, a creature worthy of the name human, has existed upon the earth. We shall then be obliged to realise that this space of a few thousand years during which we have the above more or less doubtful account of him is in reality only a very small fraction of the whole ; that for the immensely larger portion of his story we have no record here whatever ; that it is of a relatively quite unimportant little bit of human happenings that the

record tells us anything at all. And one important effect of the realisation of the true pace of human progress, so much more leisurely than men commonly suppose, should be to rebuke that impatience which they often bitterly express at the slow advancement of humanity along this latest opened spiritual path.

“ There is a big difference of opinion, I think, among the geologists as to the date at which the different geological strata that form the earth crusts have been deposited. Thus, for the most recent deposit of all, which is of a thickness of 4,000 feet, approximately (Sir James will please correct my figures if my memory has erred), we have the estimate of Professor Rutot that it was deposited in 140,000 years, while Professor Penck, on the other hand, maintains that it occupied at least half a million, and perhaps a million and a half, in the laying down. The estimate of Professor Sollas,¹ adopted by Dr. Arthur Keith² in his *Antiquity of Man*, takes a medium view between these wide extremes, and reckons for all the more recent strata a uniform rate of deposit of one foot in one hundred years. Is that not so ? ” he asked, as he turned, with a courtesy rather unusual, to Sir James Macadam.

A nod of Sir James's grizzled head confirmed the figures as Launceston stated them. “ But,” the old Scot added prudently, “ I know nothing about your Dr. Keith.”

“ No ? ” said Launceston. “ I'm surprised. But

¹ *Nature*, 1900, vol. lxii, p. 481.

² *Antiquity of Man*, p. 307.

he is a modern ; that quite explains it. But the importance of these calculations for my purpose lies in this, that the probable date of man's appearance on the scene is indicated, in the geological record, by the age of the strata in which we find weapons and flint implements which show human handiwork. I think that approximately a million years ago would be the earliest date according to the above calculation. That means that man, a creature with a brain entitling him to the dignity of that name, has existed on the earth for a million years. To say nothing of the countless ages through which evolution was making its patient preparations for him, the actual human drama has been playing itself out all that while. See what a tiny proportion of that total is covered by the ten thousand years which people are in the habit of deeming to comprise almost the whole story. It is, in fact, just one hundredth, or 1 per cent., of the whole that they have accustomed themselves to look upon as the sum-total. We need a drastic readjustment of our perspective into the chronology of human happenings on the earth. Or, if it should please us to refer the beginning of the story to the date when the human stem branched from the common anthropoid or from some earlier simian stock we should of course have to go back immensely farther again."

"There's one thing," said Foljambe, "I don't quite understand." ("Impossible!" Launceston interjected, but Foljambe took no notice of the impertinence.) "If man has lived on the earth such a devil of a time, as you say, how is it you don't

find more of him—more bones and things, when you begin to dig? How is it you don't find the missing link?"

"Oh, surely, you don't have to look very far for the missing link. No, no, I don't mean anything personal," he said hastily, as Foljambe began furiously to splutter. "I only mean that we have got him for you already labelled, and you may find him described in any book of anthropology. He lived in Java, at least he was found buried there. His name is *Pithecanthropus Erectus*—the ape-man who stands upright—more or less upright, you should understand. I hardly suppose he had quite your military carriage. Then, as to why we don't find more skeletons when we dig: you are not to suppose that there were crowded graveyards in those days. You must not imagine a human population as we have it to-day. The correct idea, I suppose, would be of humanity barely and with great difficulty supporting its life and prolonging its race in the midst of terrible competitors around it. Very sparse, indeed, must have been that early human population, though apparently of several different species; and big carnivores to break up the skeletons were plentiful. Man has left us some good milestones, for all that, by which we can track his progress—the earlier and later Stone Ages, the bronze age, and so on. Just how early he began that tool-making which is one of the clear-cut distinctions between him and the other animals is very much disputed—whether the Eoliths from the Pliocene and Miocene and even earlier are of human making is still an open question, but there is

evidence that he made pits for elephant trapping in the Pliocene."

"I'd like to have known him," was Foljambe's comment, which raised a laugh.

"You would have been great friends, I'm sure," Launceston said, "with a great deal in common. No, no," he protested again as Foljambe showed renewed symptoms of the wrathful splutter. "On the whole, the ancient skulls show a brain capacity not inferior—in size, I mean, the convolutions are not so certain—to modern Caucasian skulls and far larger than some existing races, like the Australian. Dr. Keith says explicitly that the aboriginal race of Australia might "serve as a common ancestor of all modern races."¹ The Neanderthal man, with his big, heavy head, and curious specialisation in more than one direction, was quite an exceptional type. In his extinction I expect he paid what seems to be the inevitable penalty of over-specialisation.

"And yet this great-headed, extinct, altogether abnormal human creature, furnishes us with what, to my mind, is perhaps the most striking and arresting fact of all in the ancient story of our kind. He bears us witness that even so long ago as his remote Pleistocene day man must have begun to form conjectures about a future life for his individual self, for already we find him burying, with his dead, provision of food and of weapons for the voyage to the other world."

"That is a consideration which seems to me to affect the perspective of the whole human story

¹ *Antiquity of Man*, p. 270.

² *Ibid.*, p. 117.

profoundly. It would not be correct to say that it was very early, as measured by the whole duration of the human drama, that man began to speculate on a life of his soul beyond the terrestrial plane. Even the beginnings of the Pleistocene period are not put further back than 400,000 years, and there is no evidence, so far as I know, of burial or provision for the dead in the Pliocene. It may have been even far on in the Pleistocene that the idea of a life after death was first formed in man's developing brain. That does not place it in a really early chapter of the story. But it does, on the other hand, put it immensely farther back than any date at which most people think of it as an element in human thought. Much surprise, as no doubt you all know, has been expressed at the discovery that the surgical operation of trepanning was well known and freely practised by man in the far later Neolithic age. And it was practised with success, as is proved by evidence in many of the instances that the edges of the cut bone have healed.

“That is a marvellous fact, though it is to be matched to-day by a like operation performed among some modern tribes of a low degree of culture, such as the natives of New Ireland. It was also in use among the Peruvians of past, but historical, time. Yet this bold bit of surgery, done with the primitive tools of sharp obsidian, strikes me as nothing, by way of witness to the antiquity of man's origin and the slowness with which the mills of God have ground him into his present state of imperfection, compared with that striking spectacle of Neanderthal man, and also his

contemporaries of a species more like ourselves, burying the dead with their viaticum in the remote Pleistocene past.

"We may turn all the pages of the later story in such books as Lubbock's *Prehistoric Times*, Tylor's *Primitive Culture*, Frazer's *Golden Bough*, and so on, yet nowhere find another quite so arresting as this."

Launceston buttonholed me when the room began to clear. "Do you think," he said, "the Club would stand an allegory?"

"On what topic?" I asked.

"On the Universal Cinematograph."

"What's that?"

"Think, and you will see. Good-night."

CHAPTER XIV

THE UNIVERSAL CINEMATOGRAPH

WHEN Launceston told me that I might announce that he would read a paper on 'The Universal Cinematograph' I was immediately beset by all manner of questions as to what the mischief he could mean by it. I referred the inquirers to the reader of the paper himself, a reference which rid me of their importunities but did not greatly advance their information, for Launceston was not an easy man to 'draw,' if he did not feel disposed for drawing, and he was not famous for a very forthcoming disposition in that respect. The most they could get from him was: "What does it mean? Universal Cinematograph? Surely it explains itself. I can't tell you any more clearly than that what it means."

With that answer they had to go away, discontented, generally to return to me again with further demand for enlightenment; but it was light that I could not have given them, if I would, for I knew no better than they what Launceston intended by his title. One thing only I did know better—I knew better than to go on pestering him to tell me his meaning. I saw that he had no inclination to explain himself, and at that I left it.

If his object in enshrouding himself in this reticence was to attract an audience he was successful. I have seldom seen the large room in which we held our 'Thursdays' so crowded. Contrary to his custom, it appeared that he had this paper written out—typed in full. He looked carefully at the page, which he held close to his eyes, as if he needed to consult it to remind him of his subject, and read out the heading :

'The Universal Cinematograph.'

He proceeded, in the level tones that he might have used for reading a newspaper money market report, as follows :

"There was nothing doing in heaven : the archangels, particularly, were at leisure ; and Gabriel said to Michael :

" 'Have you had a look at that planet, the Earth, lately ? ' "

" 'No,' Michael said, 'I have not seen it for a long time—I forget just how long it is. I should say about a million years or so—something like that.' "

" 'I know,' Gabriel answered. 'I think we had a look at it together then. It was just about the time when that new thing, Man, was developing on it—d'you remember ? And we thought what a curious thing it was. D'you remember—quite a small powerless creature, but it could do things that none of the others could. It could plan ahead—I mean, make plans and act up to them—much more as we do than any of the other Earth animals.' "

D'you remember it could make fire : none of the other Earth animals could do that ? '

" ' Yes, I remember,' said Michael, ' and,' he added, always interested in anything that had to do with martial weapons or the like, ' bows and arrows.'

" ' Ah, so it did. I recollect, too, I said at the time that the other animals, the big things like those mammoths and the sabre-toothed tigers, must look to it that Man didn't get the mastery of all of them, although he was such a poor, weak-looking little thing, with this power of his which made him something like us.'

" ' Oh yes,' Michael replied scornfully, ' you're always guessing, Gabriel, and nine times out of ten, evolution goes just the other way from that which you've expected of it. Look at what happened in Orion, and again in the Moon, and what you'd said was going to happen.'

" ' Well,' Gabriel admitted, ' I confess I was mistaken. That's a thing that may happen to any archangel. I don't pretend to omniscience. But what I do assert is that it's more interesting making guesses at what's going to happen, even if it don't quite come off, than it is to go on like you, Michael, through all eternity just flying about and never thinking about anything at all.'

" ' Well, well,' said Michael good-humouredly, ' don't let's quarrel about it : it's such a bad example to the lower angels. Shall we go and have a look at the Earth and see how it's getting on and whether your speculations have come off this time ? '

“ ‘ Very well, then, I’ll come along ; only don’t you make any mistake about it—I’m not *expecting* to find that that little thing man has the mastery over the other Earth animals. What I *expect* is that the others, the bigger ones and the biting ones, have killed him off long ago. I’m only saying that it’s not impossible that he might have got the mastery over them by his reason. I don’t suppose for a moment that he has.’

“ ‘ Oh ! I say,’ Michael said, ‘ I call that hedging ’; but he flew along contentedly beside the other all the same.

“ ‘ How long ago is it that you first had a look at the Earth ? ’ Gabriel asked.

“ ‘ Oh, I don’t know—it’s a good long while. It was just about the time that it had cooled down a bit and that life was just beginning on it. I generally go and have a look at the new planets just when life’s beginning on them. It’s interesting.’

“ ‘ Yes, it is,’ Gabriel agreed. ‘ I wish I had the time to do it, but these planets change so fast, one has no time to keep up with them all.’

“ ‘ No,’ said Michael, ‘ but I like to have a look at them now and again, to see how they’re going on. As a matter of fact, it’s some time since I’ve been in the solar system at all—there are such a lot of systems to go and see.’

“ ‘ I suppose we’re going right, aren’t we ? ’ Gabriel asked anxiously. ‘ I’m not very certain about the way.’

“ ‘ Oh yes, I’m pretty sure we are, but we may as well just ask somebody.’ He hailed a passing

angel as he spoke, who assured them that they were heading quite straight for the solar system. Michael asked how far it was.

“ ‘It’ll take you about twenty minutes,’ the lower angel said quietly, and Michael thanked him and they flew on.

“ The normal pace of an archangel, when there is no reason for hurry is, roughly speaking, about sixty or seventy times the speed of light, and light travels at the rate of 186,000 miles a second, so you can very easily calculate how far they had to go to reach the solar system.

“ ‘What interests me,” said Michael, as they paddled on, ‘is to see what very different forms life assumes on the different planets.’

“ ‘Well, but, my dear Michael,’ replied Gabriel, who sometimes found it a little hard to be patient with the slower intelligence of the soldier archangel, ‘you surely would not expect to see the same kind of life being developed in an atmosphere full of hydrogen, say, as in an atmosphere of oxygen and nitrogen—not to speak of the different force of gravity in different planets when one’s ever so many times the size of the other.’

“ ‘No, I don’t say that you would expect it, but I say it’s interesting to see the difference all the same.’ Michael stuck to his point.

“ Presently they found themselves in the solar system, which they knew at once by the direction in which the ether circulated. Besides, they could see plenty of familiar stellar marks—the Southern Cross, the Great Bear, and so on. An archangel can see nothing of any system in the universe

except that in which he happens to be, but once he is within the limits of any one system he can see all that is going on within it, and can hear anything, too. Obviously, it is not at all the same kind of seeing and hearing as that of men, for while the archangels can see and hear everything—the totality of sights and sounds—they can also see and hear each detail separately and in such a way that its sight or sound is never confused and muddled up in that of the whole—as a man's sight or hearing of particular faces or voices is confused in a great crowd. The archangels were able to take a view of the whole system at once, if it so pleased them, or again they could, if they pleased, shut out all except a single detail, and, of course, as they moved so much faster than the light, they could see what had happened at any moment of any planet's history by just going to the point of space to which the light from that planet had travelled during the time which had elapsed since the occurrence of the events which they wished to see.¹

“However, they did not dally much just then, because they had come into the solar system at a point nearly opposite that at which the Earth happened to be, for the moment, and as they went along Michael exclaimed: ‘I say, the sun's hot; don't let's go too near him, let's go along a little faster, and get round him.’

“They put on a little spurt to something like

¹ NOTE:—All this was before Einstein had come to tell us that nothing can go faster than light; but perhaps even he would make an exception of archangels.

a hundred times the speed of light, and, coasting round, soon got into the shade of Mercury, out of the too intense sun-heat, and could see the Earth quite comfortably. It was less than a hundred million miles away. Directly they got out of the glare they could see everything in the Earth very clearly.

“ For a moment or two after getting their eyes into focus for seeing things on the Earth, the two archangels were speechless. They were speechless with amazement. Then Gabriel said, solemnly, ‘ Michael, it’s the most extraordinary thing I ever saw. I never saw such a development on this or any other planet, did you ? And in so short a time ? ’

“ ‘ Certainly, I never did,’ Michael admitted, scarcely heeding what Gabriel said in the intentness of his study of the Earth.

“ ‘ I said a minute ago,’ Gabriel continued, ‘ that I thought man would have got the better of the rest——’

“ ‘ You distinctly said you thought it most probable he would not,’ Michael interrupted.

“ ‘ But,’ Gabriel went on, taking no notice, ‘ I never thought it would come to this—why, man is everywhere, man is everything. The rest of the animals are nothing ; they are nowhere on the Earth. Why, bless me, there must be—what—a thousand million of men ! ’

“ ‘ More, far more,’ said Michael decisively. It was part of his ordinary day’s work to compute the numbers of armies. ‘ Half as much again, and more.’

“ ‘ Wonderful,’ said Gabriel, ‘ and look—their

cities, their houses, their ships, their aeroplanes—all better than I ever saw on any other planet.'

" 'Yes,' Michael agreed, 'but there are lots of things they don't seem to have that they have invented on some of the other planets—Jupiter, say, and Uranus. There are no — nor —, etc.' He mentioned terms that, of course, could have no meaning for any person on Earth, since Earth has never known the things for which the terms stood.

" 'No,' said Gabriel, 'that's true. But naturally you could not expect any one planet to find out everything. That would be too much to expect. And their music! Hark! is it not fine?'

" It happened to be Sunday afternoon, and selections from Bach's Passion Music were being sung in the Temple Church.

" 'It's wonderful for such tiny little creatures, certainly,' Michael agreed.

" 'I told you so,' Gabriel said. 'I told you how it would be, that man's development would be extraordinary.'

" 'I tell you what it is, Gabriel,' Michael replied. 'I'll bring the recording angel along next time we go to see a new planet together. It seems to me your memory's such a good one that you remember a lot of things that never happened.'

" 'Is it? I'm not going to quarrel with you,' Gabriel answered, laughing. 'I'm too interested to quarrel. But for goodness' sake, don't do that—don't bring the Recorder along. He has his uses, I grant you, but he's a dry little mathematician of a fellow. No imagination!'

" 'No, but you've enough for two,' Michael

retorted. But Gabriel hardly heard him. He was all intent on the Earth drama.

“ ‘It’s very touching,’ he said, ‘and very beautiful. These little creatures, these men, have become living spirits.’ But then, as he continued to hearken, his face broadened out into a smile. ‘Michael,’ he exclaimed, ‘Michael, listen! Do you hear what they are saying, these men? They are praying God that He will not be angry with them! Angry—God! And with little things like that! Michael, is it believable? Listen what they said then: “Save us, O Lord, from Thy wrathful indignation.” Oh, Michael—wrathful indignation! Think of it! The notion that God—God—could be “angry,” could be moved to “wrathful indignation,” by little tinies like these. Oh, Michael, the idea of it!’

“ ‘We’ve seen strange fancies grow up in the thoughts of the creatures on other planets, too—haven’t we?’ Michael said, ‘when they first began to have a living spirit within them.’

“ ‘Yes, we have, to be sure,’ Gabriel answered, ‘but nothing, surely, nothing quite so ridiculous as this—that He whom they evidently realise, more or less, to be the Creator of all this’—he flung his immense arm aloft to indicate the infinitude of space about them—‘that He—He could be stirred to anger—to anger, Michael!—by little atomies like these. Of course, He will be moved to grief for them, sorrow for the pain they bring on themselves by their follies while they are working their hard way up through evolution’s school to some clearer knowledge. We know that had to be,

on every planet that we have seen support life for the brief space of time between its incandescence and its freezing—but anger! To think that they should imagine they move the Creator of it all to anger! Oh, Michael, are they not funny little things! Look at them—how busy! And what d’you suppose they think it is all about? What do they think they’re doing?’

“‘I never was clever like you, Gabriel, guessing what was happening, or going to happen, on the planets,’ Michael said humbly.

“‘I tell you what seems to me to be going to happen very soon on this Earth,’ Gabriel said. ‘The men are breeding too fast. They’ll get it too crowded up directly.’

“‘Looks like it,’ Michael agreed. ‘I expect there’ll be trouble about it soon.’

“‘Bound to be,’ said Gabriel. ‘Don’t you remember what happened in Jupiter? First they passed the Eugenic Act, that only the sound in body should have children, and then less than a thousand years later they passed the Moral Eugenic Act, that only those who were morally sound should marry. It began, you know, with their forbidding any criminals to marry—it grew out of that.’

“‘I seem to remember something about it.’

“‘Oh yes, and then in a few generations they bred out the morally unsound just as, a thousand years or less before, they had bred out the physically unsound. They were fine spirits in Jupiter before life was ended on it—almost angelic.’

“‘Yes, but they couldn’t do that till they had

one set of laws for the whole planet. These men, on the Earth, are divided into nations and each has a different set of laws.'

" ' Oh yes,' Gabriel said impatiently, ' but surely you know that is just a phase that all the planets have gone through. They will soon get over that. Why, we've heard them talking a great deal about internationalism even while we've been listening to them here. That is the beginning of a single set of laws for the whole planet—of course with a few differing local regulations which the difference in climate makes necessary.'

" ' But law itself is only a phase, isn't it ? '

" ' Of course it is ; of course these Jupiter creatures didn't need any laws at all when they were all morally sound. They had gradually eliminated all the bad laws, and none of them ever broke, or wanted to break, the good laws ; so naturally the laws ceased to exist for them—it must always be like that.'

" ' I want to have a look at the story of these people,' Gabriel said, ' to see how they have come to the point they are at now.'

" Of course it was not necessary for the arch-angels, with a power of vision unlimited within the system in which they happened to be, to pore over written pages in order to read a history. All that was needful for them to do was to transport themselves to the point in space from which they would see the events in actual process. If this is at all difficult, at first, to understand, it becomes obvious the moment we begin to think of the mode, and the pace, of transmission of light. To take an easy

and concrete instance, in small figures, it was only necessary for these archangels to go to a point in space so far distant from the Earth that light from the Earth would take a thousand years to reach it in order to see the events that were taking place on Earth a thousand years ago. That is quite simple. In fact, the whole story of the Earth, or of any other planet, is, as we might say, 'filmed' at some distance or other—it only needs to go to the right distance in order to see the event in occurrence.

“Then, if these archangels, having seen all that they wished of the happenings of a thousand years ago, desired to read off the history of the next hundred years, let us say, all they had to do was to move a little nearer earthward till they came to the point to which light from the Earth would have travelled in nine hundred years. Thus the whole course of events would be unrolled for them as if they had been actual participators in it. And equally, of course, by travelling away from the Earth at rather a faster pace than the light, they might, had they a wish for any such fantastic entertainment, see the course of events unrolling itself backwards—might read history backwards, as we say—see what happened previously before that which happened later—instead of watching the shell from the long-range 'Big Bertha' coming from the muzzle of the gun and falling on Paris to knock down Notre Dame Church, watch the reverse appearing to happen—the church gradually building up again its fallen stones and pillars, the shell appearing to recede from the neighbourhood of

Paris, and disappearing again down the muzzle of the 'Big Bertha' from which it was launched. All this they might see if they wished. All that was needed to see it was the power of moving rather faster than the light and a vision virtually infinite for that system in which they were. These two conditions granted, the rest is simple, is natural, and inevitable.

"As a matter of fact, the point to which it pleased these archangels to transport themselves first, to begin their inspection of the story of our planet, was about one thousand times, in round figures, more distant than that which we have been imagining—a point from which they could view the happenings of about a million years ago.

" 'You see,' said Gabriel, as they went along to it, 'if we begin about a million years back that will just take up the story from the point which it had reached the last time I came to have a look at the Earth. That, if I remember right, was just about a million years ago.

" 'Ah yes,' he said, when they had arrived there. 'That is just about how it was: I recognise it all.'

" 'I don't want to bother you,' said Launceston, 'about all the Earth history they saw—Pithecanthropus, Neanderthal man, the glacial epochs, the different Stone Ages, the Bronze, and so on. It interested them, because they were seeing and hearing it all for the first time; but it would only bore you, who have heard it all a hundred times. Of course they were coming gradually nearer the

Earth all the time at about the same gentle pace that light travels so as to see the events in their right order.

“ ‘ Look here, Michael,’ Gabriel exclaimed, when they had come down so close that they could see things almost as we might see them happen. ‘ Isn’t that funny ? You remember a little while back—in the year they called 451, wasn’t it ?—we saw those men coming from the East under the man they called Attila, wasn’t it ? They were stopped by the Western men at exactly that same place, Chalons, that these men who are coming from the East now are being stopped. Funny thing, isn’t it ? ’ ”

“ ‘ Yes,’ Michael agreed. “ I don’t like their way of fighting nearly so much now though—all that noise and smoke. Tiresome, I call it. I like to see my Devil when I’m fighting him.’ ”

“ I daresay you’re right. Well—there’s not much more to see. We ought to be getting back. We can drop down and see how they’re getting on again after another million years or so.’ ”

“ ‘ Yes, let’s go. Good idea of yours though, Gabriel,’ Michael said approvingly as they flew back again—‘ not a bad show at all.’ ”

“ Gabriel was silent for a while. Then : ‘ Would you say they were making progress—those people ? ’ he asked.

“ ‘ Progress ? How do you mean ? ’ ”

“ ‘ Well, does it seem to you that they were any more advanced that second time that the fellows from the East got their set-back at Chalons than they were the first ? ’ ”

“ ‘ I don’t know, I’m sure. What do you think about it ? ’

“ ‘ They could kill each other at longer range : that’s about all the difference I could see.’

“ ‘ That’s something,’ said the fighting arch-angel.

“ Gabriel laughed.”

And on that note of celestial laughter Launceston stopped.

CHAPTER XV

THE EARTH'S PLACE IN SPACE

THERE was a good deal of discussion after Launceston had finished his Universal Cinematograph address, but I did not take any notes of it. A day or two later when I came into the Club, Foljambe met me, also coming in. We found Launceston in a corner of the morning-room, writing.

"Strong on the wing, those archangels of yours, eh, Launceston?" Foljambe said. "Have to hold pretty far ahead when they were coming over."

Launceston did not deign him any attention.

"What the deuce did you mean by it all, if it meant anything? What was it all about?"

"Time, time," Launceston snapped, without looking up from his papers.

"Time! Time!" Foljambe echoed. "We aren't at a boxing match."

"The relativity of time and space then. That's what I wanted to illustrate."

"Thanks. I'm afraid I'm no wiser than I was."

"You can't possibly be more foolish, if that's any comfort. Do go away: I'm trying to write."

"Damn old bear! Not fit to be in a Club," said Foljambe, and was going out, grumbling, when Launceston jumped from his chair.

"Sorry, sorry, old fellow," he said. "I apologise. It's those damned gases. You wouldn't be very sweet-tempered yourself if you'd a vulture always tearing at your vitals."

"Our old friend Prometheus, eh?"

"What a memory you've got!"

"I don't forget my old friends. My tutor introduced me to him. I always felt sorry for the old chap—Prometheus, I mean—and I'm sorry for you too, Launceston, I'm sure. Vultures at your vitals!"

"We call them microbes nowadays, but that doesn't seem to blunt their beaks."

"Persnore tells me you're better in essentials," I ventured.

"Oh, cuss the essentials! I don't care a bit about them. They're the things that kill you—I don't mind them. What I mind are the things that keep you alive and keep you worried all the time. Gastritis, the doctors call it. Sensible men call it stomach-ache."

"Those archangels," Foljambe put in, "do you suppose they have it?"

"Wait and see, old fellow; you're sure to be one before very long."

"By the way, we had a talk in Black's the other night—I was telling them, as well as I could, about these archangels of yours, and we were trying to reckon how far we'd have to hold ahead, and we got talking about how big the earth is. How big is it?"

"You mean, diameter, circumference—what?"

"No, no—I don't mean like that; I mean, how

big is it compared with the rest of the job—with the universe, I suppose you'd call it ? ”

Launceston grinned with the relish which he often found in Foljambe's talk. “ Perhaps I might tell you that,” he said, “ if you could tell me just one thing.”

“ What's that ? ”

“ The size of the universe.”

“ Oh well,” said Foljambe, “ I thought you, don't you know, were more likely to know about that than me.”

“ I like your ‘ me ’—the accusative sounds modest. Good subject for a debate,” he went on, turning to me—“ The Earth's Space in the Universe.”

“ Excellent, if you'll open it.”

“ I don't mind. You seem to have got me on the talk. But I do too much of the talking.”

I should have told any other of the members that we could not have too much of him—which would have been untrue. I did not tell Launceston so, of whom it might be almost true. I knew him better.

“ Come and hear what I have to say about it, Foljambe,” he said, “ and give us your own comments. It's rather a big question to answer just now, without notice.”

Therefore, a few Thursdays later, Launceston opened for us with the heading not precisely as he had suggested. He now gave us as the subject of his paper :

THE EARTH'S PLACE IN SPACE

"There is a point," he began, "in which the perspective of the ordinary man, who has given little thought to science, seems to stand in some need of correction—that is, his view of the size of this world of his in relation to the general scheme.

"If you ask the 'man in the street' or the 'man in the club,' 'What is the size of the earth as compared with the universe surrounding it?' he will answer readily enough: 'Oh, we are a very small affair really' and, saying this, he will deem himself to have shown a remarkable intelligence, perhaps rather more humility than was to be expected of him, and will reflect, with complacency, how greatly more enlightened we are than those poor forefathers of ours who believed the earth to be the hub of the universe around which the rest revolved.

"Pressing such specimens of the 'ordinary man,' as we may make bold to call him, for some standard of measurement of the size of the world in comparison with the universe, we are likely to get extraordinarily different answers. One will say, 'Oh, I should think the earth, in comparison with the whole affair, is something like what Ireland would be in comparison with the earth.'

"Another will put the ratio of the earth to this 'whole affair' as 'no more than an English county in comparison with the globe'; another will say it is 'as Hyde Park is to the earth'; a fourth as 'St. Paul's to the whole earth.' But that last is a proposition which will hardly be accepted without some gentle derision and protest such as 'Oh no, my dear fellow, we may be a little bit of a planet,

it is true, but we can't count for quite so little as that amounts to in the general scheme.'

"Of course, the question, as I have put it, is an absolutely unfair one. It involves a trap and a fallacy; but 'the man in the club' is very unlikely to detect that (unless the club be the Athenæum, or some such home of wiseacres). As a matter of fact, we do not in the least know the limits of the universe, if any, and it is perhaps equally difficult for the human mind to conceive its limits as to conceive it limitless. There is a point, however, at which we may begin to draw an imaginary line around some portion of this universe, and that is the farthest point at which a star is visible to us with the aid of our most powerful telescopes. The distance which we can thus visually probe is so immense that it is quite impossible to give any idea of it by means of our ordinary measurements of space, such as miles. We can only hope to get, and to give, some dim notion of these distances by expressing them in terms of the time which light takes in traversing space.

"Looking out from our globe, in all directions, with our telescopes, we arrive at points on an immense, earth-enveloping sphere. That sphere is of such dimensions that, as Lord Kelvin tells us, it would 'take 6,000 years for light to travel right across it.' Sir Oliver Lodge¹ quotes some further remarks of Lord Kelvin under this head, so the estimate of these vast spaces has authority. It is so amazing as to need all possible vouchers for its at least approximate accuracy.

¹ *Substance and Faith*. Sir O. Lodge, p. 61.

"I am afraid I must bother you with some rather large figures. If they trouble you at all, please refer to our friend Mr. Foljambe, who is really responsible for this debate."

Foljambe, thus unexpectedly mentioned, spluttered.

"Light," Launceston resumed, "travels at the rate of about 186,000 miles per second. To get the distance therefore, in miles, of the diameter of this sphere, you would have to reduce 6,000 years to its equivalent number of seconds, and to multiply the result by 186,000. There are 31,536,000 seconds in a year, so the sum is quite an easy one to do, but by the time you have worked it out the figures and the mileage are so big that they convey scarcely any meaning.

"Now the diameter of the earth is, roundly, and taking an average measurement, 7,900 miles. And since light travels at the rate of 186,000 miles a second, and 7,900 goes into 186,000 about 23 times,¹ light would traverse the distance of the diameter of the earth in about one twenty-third of a second. So, if we can form any idea of the comparison between one twenty-third of a second and 6,000 years, we may have a corresponding idea of the comparison between the size of the earth and of the sphere which is shown to us by our most powerful telescopes.

"And even this sphere is only a piece which our minds and our telescopes, in combination, have carved out of a whole of we know not how much greater dimension—if it have dimension at all.

¹ 23.54 times—precisely.

“ We may try to get an idea of the relative sizes of the earth and of this telescopically visible sphere in another way.

“ Since light would traverse the distance of the diameter of the earth in one twenty-third of a second, it follows that its diameter would have to be twenty-three times longer than it is for light to occupy one second in traversing it.

“ Yet, even in that case, it would still be 6,000 multiplied by $31\frac{1}{2}$ million times smaller than this visible sphere. (I am taking here $31\frac{1}{2}$ millions as approximating to the actual 31,536,000 seconds in a year.)

“ Now the earth’s diameter, without this multiplication by 23, is 7,900 miles, which works out at, roughly, 500 millions of inches. Therefore one inch is only 500 millions of times smaller than the diameter of the earth. Compare that with the number, noted above, of millions of times that the earth’s diameter, even after being multiplied by twenty-three, is smaller than the diameter of our visible sphere !

“ Surely it gives rather a startling measure of the exceeding, the incredible, minuteness of our earth in the general scheme.

“ It boils down in the end to this, that the diameter of the telescopically visible sphere is to the diameter of our earth, as that diameter is to $\frac{1}{83336}$ (roundly) of an inch : and I am told that one ten-thousandth of an inch is nearly the least that our most powerful microscopes can reveal to us.

“ That last result you may arrive at in this way : The multiplication of the $31\frac{1}{2}$ millions by 6,000 gives

you 189,000 million as the number of seconds which light would take to go across the big sphere. It would take one second to go across the D of E (diameter of earth) if that diameter were 23 times greater than it is. The relation of the diameter of the sphere—call it D of S—would therefore be to the D of E as 186,000 millions, multiplied by 23, to one, or 4,278,000 millions to one. Now the D of E is 500 millions of inches. Therefore the D of E stands in the same relation to the D of S as 500 million inches divided by 4,278,000 millions stands to D of E. That is to say that—

$$\text{As D of S : D of E :: D of E to } \frac{5}{42780} \text{ of an in.} \\ = \frac{1}{8556} \text{ " " "}$$

“ It appears, therefore, that the size of the earth relatively to this portion, which we can make visible, of the terrestrial space, is not as that of Ireland to the whole earth, nor as that of an English county, nor as Hyde Park, nor even as St. Paul's Cathedral. The relation is as that of the earth to this scarcely imaginable and even microscopically invisible fraction of an inch.

“ Let us try ‘another way’—to use classic phrase—of envisaging, or forming some idea of, the quantitative importance of our planet in the universal scheme.

“ The sun, the source of light to us, is, relatively, quite a near neighbour. If we were in an airship and could travel straight towards the sun at a constant speed, all the way, of fifty miles an hour, we should arrive there in a little over two hundred and ten years. It is but a step in comparison

with the distances of that spatial sphere which we have been considering. It is but 93 million miles.

"Since light travels at the rate of 186,000 miles a second, we get the time occupied by the coming of the sun's light to us by means of dividing 93,000,000 by 186,000—with the result that we find that time to be 500 seconds, or 8 minutes, 20 seconds.

"Dimly, by comparing in our minds the idea of $8\frac{1}{2}$ minutes with the idea of 6,000 years, we may get a notion of the distance between our earth and the sun in comparison with the distance of the diameter of the sphere whose confines our telescopic vision can reach.

"The very nearest of the fixed stars is so far from us that it takes the light four years and four months to reach us, indicating a scarcely conceivable greater distance than that of the sun from the earth. But the farthest of the fixed stars that we can see through our telescopes would be so distant that it would take the light three thousand years to reach us, a time dimension which suggests a space not almost, but utterly, beyond the power of our minds to form a notion of.

"Our earth, therefore, in comparison with the space which our telescopes can reveal to us (which itself is but a portion of the whole, if, indeed, we can rightly give the name of 'whole' to what may, for aught we know, be infinite) is a particle of such extraordinary minuteness that the most powerful of our microscopes cannot make visible to us so small an object. It is impossible, indeed, to get our perspective correct, where the divergencies

are thus entirely beyond our ken. They stretch from what really may be the infinitely great to what for all purposes of human vision, even microscopically aided, is the infinitely little. But these considerations may at least serve to show us that the perspective of the ordinary man is even more ludicrously at fault in regard to this than to some other details which I have noticed of the terrestrial story. It needs even more drastic revision here than elsewhere. His own minuteness and the insignificance, spatially, of the scene on which he has to play his little part, are inexpressibly greater than he has commonly supposed. The size of this planet of ours which we are tempted to deem so important, is enormously, and out of all real knowledge, exaggerated when we speak of it as 'a speck in the universe.' A speck bears really much the same relation to that $\frac{1}{8556}$ th fraction of an inch as the diameter of the earth bears to that of what we vaguely call a 'speck.'

"Sir Oliver Lodge essays his contribution towards helping us to some comprehension of the distances thus :

" 'The sun a million times bigger than the earth ; Arcturus a hundred times bigger than the sun, and so distant that light has taken two centuries to come, though travelling at a rate able to carry it to New York and back in less than the twentieth part of a second—facts like these are common-places of the nursery, but even as bare facts they are appalling.'¹

"Yes, they are so appalling that although they

¹ *Raymond*, Sir O. Lodge, p. 309.

may be, as he writes, with some exaggeration, 'commonplaces of the nursery,' it requires a mind very far removed from the commonplace, probably far higher than the human, to appreciate their real meaning.

"All these are considerations which may well incline man towards a tolerably modest estimate of the importance in the general scheme of his terrestrial home. It may well rebuke any tendency to big and boastful views of himself and of his immediate environment. It is almost inevitable, seeing of what fashion the human mind is made, that it should have this influence.

"Yet, it is an influence utterly unreasonable.

"To the human mind, with its ideas of the importance of mere size and quantity, it must seem that nothing so tiny, as this earth is proved to be, can count for much. For that mind it is difficult to realise that, to the infinite, size, whether great or small, means no more than time, whether short or long, to the eternal. These are but finite and relative measures, and have no place in the infinite and absolute, for

'Scant is the need of dial, to tell how the minutes flee,
For Him who measures His piece-work on the scale of Eternity.'

The further we develop our microscopes, and the more minutely we are able to pry into the composition of the smallest particles of the world's substance, the more our amazement grows at their perfection and finish, even in their material parts. Microscopically and telescopically alike, the universe reveals to us further marvels the further we

contrive to see into it. The further science leads us in the one direction or the other, the larger and longer vistas she opens to our gaze. The two secrets that she denies to our quest are the ends of the vistas, and their beginnings. We live and move here in the midst of, and as part of, the great life current, with short views this way and that, for a short while only. Yet, for all that, we have no reason to deem ourselves of slight account.

“As we have learnt that for the infinite there is no little and there is no great, so, for the infinite creative mind, this little that we are may be far more than equal, in its true import, to the greatest at which we can guess. I would even contend that the extreme littleness of our earth really furnishes us with firm ground for arguing the importance of the Creator's care of each individual and of his fortunes upon it. If the whole globe of earth is microscopically small in comparison with even such fraction of space as our telescopes can penetrate, and if the Creator's care is directed to so microscopic an atom at all, we seem to find in this very consideration proof positive that nothing can be too trivial for His care. Our human estimates are apt to suggest to us that such a business as the great (what we call the great) world war is something which is worthy His attention—we are disposed to regard Him as even somewhat to blame, somewhat lacking in care, in permitting it. But if you or I suffer a toothache, we are apt to deem that far too small a matter to trouble Him about. Those who believe in the use of prayer would perhaps not think it right to pray to Him

to ease it, though we do pray Him to ease us of the miseries of a great war. Yet to the vision which sees our whole earth when put into comparison with even such of the universe as is telescopically visible to us to be as minute as the smallest atom which our strongest microscopes can show us—to a vision which is familiar with such standards as these, there can be but little difference between a world war and an ache in the tooth of a single person in that world. Where the scale is so immense (probably it is even more than immense—which means only immeasurable—probably it is infinite) all differences which we are able to estimate sink to nothingness, the little assumes a size as important, or as unimportant, as the great, measures become of no account just because we are attempting to apply them to the immeasurable.

“ And there is another line of evidence which shows how absurd is the human outlook by which we measure the value of things according to their size. The extraordinary discoveries of radio-activity have revealed an energy in the tiniest atoms far transcending all that we had any idea of previously. Those great drivers of the machines of men, coal and oil, are very feeble folk in comparison. See here what Soddy says, the great chemist whom I have quoted to you before : ‘ In the slow changes of the radio-active elements there is known to be an evolution of energy nearly a million times as great as has ever been obtained from a similar weight of matter before.’ And perhaps the most extraordinary thing of all is that

we have here what is very nearly a case of eating your cake and having it too, because, in spite of the tremendous energy evolved, the power of further evolution is scarcely spent. Our knowledge of these radio-active elements is, of course, quite new; but to take the instance of radium itself, it is calculated (again I quote Soddy) that 'In a year it evolves about 150 times as much energy as would be evolved in the complete combustion of the same weight of coal' (by which complete combustion of course all your coal is spent and gone), 'yet in the fifteen years that have elapsed since the discovery no measurable diminution of this rate of emission has been observed.' It is equally powerful—that is to say, with an equality so close that the finest means which science has of measuring the power can detect no difference—now as when it was discovered, fifteen years ago, in spite of the terrific energy that it has been liberating all the while.

"Yet this radium, although it is so stable as all this, is a relatively fast liver and fast dissipator of its activity in comparison with some of the other products of the uranium series to which it belongs. The products of uranium and thorium have been arranged in a series according to the length of life of their atoms, the parent elements being the slowest of all in their changes, and there is a considerable difference—I think we may be justified in calling it quite a considerable difference—in their respective rates of change. 'Each of the changes,' writes Soddy in his *Science and Life*, 'proceeds at definite rates . . . and so it comes

about that each of their successive products has a characteristic average period of life. Its atom remains in existence for a period of time which is, on the average, definite, and which varies among the various successive members between the extremes, estimated indirectly in a variety of ways, of a hundred-thousand-millionth of a second on the one hand and twenty thousand million years on the other.' I think we really are justified in calling the difference considerable. In fact, the poet wrote very much more truly both of time and space than he realised when he wrote that

'The mills of God grind slowly,
But they grind exceeding small.'

Yet he might just as truly, though perhaps less interestingly, have written

'The mills of God grind quickly,
But they grind exceeding large.'

The fact being that they take no regard whatever of fast or slow, nor of small or large. These are relative measures which do not concern them. The very word measure does not apply to them : they deal with the immense."

"By Jove, and they're about right," said Foljambe, who had by this time sputtered out all his fury and was following Launceston with a dazed but cheerful face. "Not much need to be bothering about eternity if you were an atom of radium and lived twenty thousand million years. Long enough for me, anyway."

"Oh, you won't live as long as that if you're

244 THE EARTH'S PLACE IN SPACE

we have here what is very nearly a case of eating your cake and having it too. because, in spite of the tremendous energy evolved, the power of further evolution is scarcely spent. Our knowledge of these ultra-active elements is, of course, quite new; but to take the instance of radium itself, it is estimated (again I quote Soddy) that 'In a year it evolves about 250 times as much energy as would be evolved in the complete combustion of the same weight of coal' (by which complete combustion of course all your coal is spent and gone), 'yet in the fifteen years that have elapsed since the discovery no measurable diminution of this rate of emission has been observed.' It is equally powerful—that is to say, with an equality so close that the finest means which science has of measuring the power can detect no difference—now as when it was discovered, fifteen years ago, in spite of the terrific energy that it has been liberating all the while.

"Yet this radium, although it is so stable as all this, is a relatively fast liver and fast dissipator of its activity in comparison with some of the other products of the uranium series to which it belongs. The products of uranium and thorium have been arranged in a series according to the length of life of their atoms, the parent elements being the slowest of all in their changes, and there is a considerable difference—I think we may be justified in calling it quite a considerable difference—in their respective rates of change," writes Soddy "proceeds at definite

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"By Jove, and they're about right," said Voljambé, who had by this time spattered out all his fury and was following Laurence with a dazed but cheerful face. "Not much need to be bothering about infinity if you were an atom of matter and lived for a thousand million years. But it is a great honour to be called Sir James."

radium, old fellow," Launceston told him. "Must get yourself made of uranium to last that long."

"It shows some contempt on part of nature," said Pershore, "of our human measures, doesn't it?"

"Soddy, I believe, would tell you that you had no right to speak of this as nature. He would deny, I expect, that such a thing as 'inanimate nature' can be. Nature, I suppose, must mean something to do with birth—wasn't there a verb *nascor* that we used to hear about at Eton, Foljambe?—and Soddy will not allow any idea of birth or creation in connection with his matter and energy. That, however, is rather beside the point. There is a passage in William James's Gifford Lectures which bears directly on it. 'So long,' he says, 'as we deal with the cosmic and the general, we deal only with the symbols of reality, but *as soon as we deal with private and personal phenomena as such, we deal with realities in the completest sense of the term.*'"

"He writes that last in italics.

"We may recall, too, that well-known passage from Sir Thomas Browne's *Religio Medici*: 'That mass of flesh that circumscribes me limits not my mind. . . . Whilst I study to find how I am a microcosm or little body, I find myself something more than the great. There is surely a piece of divinity in us—something that was before the elements and pays no homage to the sun.'

"So, as the conclusion of these last three addresses with which I have opened our debates, I would ask you to regard this terrestrial drama in

rather a new light, thrown first on its distant past, and secondly on the area of the scene whereon the drama is being played.

“ That scene is inconceivably small in comparison with even that portion of creation of which we have some optical knowledge. On that inconceivably small space, man, a very tiny actor even in relation to a scene which is itself so minute, has been playing the serio-comic drama of humanity for at least one million years ; and is playing it up to a certain crux, at which it will arrive in something less than two short centuries.

“ That is the picture of terrestrial humanity, its story, its prospect and its environment which we have to envisage—considerably unlike that which imagination commonly presents to us, but assuredly rather closer to the reality. With that general picture in mind we may get something more like a true perspective in which to view the movements of the piece.”

CHAPTER XVI

THE REAL ARMAGEDDON

LAUNCESTON had surpassed his own ill record. The Club was humming like a hive of angry bees with his name the point of offence about which they buzzed. The offence really was very rank. Mollify it as his friends, such as Pershore, might, by urging that he was a sick man, so tortured and poisoned by the foul gases which he was always absorbing that a normal standard of judgment should not be applied to him—it still stank to heaven. He needed not only all they could urge, but a little beyond that again, for he had called poor old Sir James Macadam, most kindly and inoffensive of learned Scots, “a damned old fool,” called him so roundly to his own venerable and outraged face. It was monstrous, it was unpardonable; the Club went through all the adjectives that it knew to label the insult as it deserved, but still found them inadequate.

Sir James, as on a former occasion, made formal complaint to the Committee, and the Committee, as before, authorised me to write to Launceston, telling him that in the Committee’s opinion he should at once apologise and withdraw the offensive expression. There were those who favoured stronger measures, such as a specially convened

general meeting at which the question of expulsion, with the stigma of "conduct unbecoming a gentleman," should be considered ; but I think that the majority felt, regrettable though the incident was, and regrettable as the words wrung from Launceston in his morbid irritation often were, that the Club without Launceston would be the Club without the most piquant of its sauce.

So I wrote the letter as instructed, and in course of post came back a reply from Launceston. It was of some length and must have occupied him for quite an appreciable time stolen from his poisonous experiments, but it carried its own evidence to the enjoyment with which he wrote it. I have no doubt that it acted upon him as a fine tonic. Its effect on the Committee was to perplex them still more profoundly. It was my business to read the letter aloud to them, and my entertainment to observe the faces of the members as I read. For, in the midst of the long rigmarole, Launceston had written : " Let us discuss word by word the phrase to which Sir James Macadam objects. It is a phrase of but three words—damned, old, and fool. Of these, I retract the word 'damned,' because it is blasphemous ; but I maintain the word 'fool,' because it is true. As for the epithet 'old,' I have been at the trouble to look up the date of Sir James Macadam's birth in one of the many reference books of learned and illustrious men in which his name is to be read, and I find it impossible that he can in reason object to its application to him. Furthermore, I have the honour to submit to the Committee that although Sir James

Macadam has thus cast himself, by virtue of his letter of complaint, for the rôle of the injured person, I have, in fact, far stronger reason to complain of him than he of me. For he has said of me, as I am able to prove by witnesses whom the Committee will readily confess to be credible, that I am "the most disagreeable man in the Club" ("He needn't call witnesses to that," a member interrupted.) "Now I would point out to the Committee, with the utmost submission, that this is a description far more offensive than any that I ever have, or would, apply to Sir James Macadam; for he has hereby elevated me, as the Committee will observe, to a singular and unique pedestal of opprobrium, seeing that it is obvious that there can be but one *most* disagreeable man in this or any other Club, whereas it is not only possible, but I should think highly probable, and even I would go so far as to say almost certain, that both in this and in other Clubs there is quite a considerable proportion of old fools."

In this manner went on the letter, covering several sides of paper; and when I had come to an end of its reading the debate grew animated. What should be done about it?

It was generally regarded as in spirit almost an aggravation of the original offence, though purporting to be couched in terms of apology. In the midst of much controversy and diverse opinion I gained, for once, some credit by suggesting that I should send it on, as by order of the Committee, and without comment, to Sir James himself, to see how he would receive it. We might allow our

future course to be shaped by his attitude, if we approved it; if not, we were in no worse case than the present. This was passed *nem. con.*, and I forwarded the letter accordingly.

And then the funniest episode of the whole farce was enacted—Sir James Macadam carrying the letter round from one member to another, asking each in turn what he thought of it; and whether he ought to look on it as an apology.

Launceston's attitude at the time was humorous, too, for he went about the Club quite serenely, as if he were entirely unconscious that he had ever been the occasion of any storm and was a very present storm-centre still.

Macadam had not answered Launceston's letter, either directly or through the Committee, before a next debate night came. Launceston was again due to open the discussion for us. He had agreed to do so following a desire expressed by some of the members in consequence of a word that he had let drop towards the conclusion of his address on the Earth's Place in Space. He had then spoken of a certain crux at which the earth was due to arrive in some two hundred years or so, and I had been requested, before his outrageous affront of Sir James Macadam, to invite him to expound to us the meaning of this mysterious hint. He had agreed to do so, but declined to unfold the meaning before the delivery of the address itself, and he began it in these terms :

" I have tried, in two former papers, which I have read you, to say something about two of the illusions in which men in general seem to me to live—

the illusion about the age of man on the earth, and the illusion about the size of the earth in the universal scale. I now would like to say a word, if you will allow me, about another popular illusion—the illusion that man can go on living as he now lives on the earth, fulfilling and multiplying—the illusion of ignorance that a great crux in his terrestrial destiny, the greatest, I suppose, that will have faced him at any time since he became possessed of reason and became man, is hard upon him. I propose to say a word to-night about what I will call ‘World Congestion and the Real Armageddon.’ ”

He had a genius for headlines. It should be remembered that we were still in the stress of the Great War. There was not the least fear of our forgetting it, for that evening at least, for, almost before he started, the alarm bombs had gone and the greater part of his address was punctuated freely by reports of varying noise and terror. Still he went on in his even, wearied voice, which carried wonderfully, and seemed to cut through deeper sounds with its thin, shrill edge.

He paused a moment after the announcement of his topic, as if to let its meaning penetrate, and proceeded :

“ It is likely that we who live in the first quarter of the twentieth century may deem that these, which it is our own lot to endure, are sufficiently strenuous and stirring times. Nevertheless, if we can but free our eyes of prejudice and look with a clear gaze on the future, we are obliged to perceive that the moment of extreme stress has by no means fallen upon humanity even now ; that it has yet to come,

and that it threatens the world in a not very remote future.

“ I realise quite fully that this is prophecy of no smooth or popular kind. It is not thus that many people envisage the possibilities of the days when the great European War shall be a memory and we have bequeathed, as we fondly hope, peace upon earth to our posterity for many generations. For a generation or two, it is true, peace of very exhaustion will perhaps be the portion of the nations engaged, but it is not the least use to close our eyes to the grim prospect that lies further ahead again. Not in our time, nor in that even of our grandchildren maybe, will the real, the shrewdest pinch come, but when its pressure does, as infallibly it must, close in, it will prove by far the most terrible and most testing grip that poor humanity has been called on to endure upon this planet.”

Again he paused for a moment, as if to allow the full horror of the prospect which he suggested to come home to our stricken souls. He went on in a voice of added and affected weariness :

“ I have the honour to be addressing a literary audience. I will assume therefore that you all read your Whittaker's Almanack. In that admirable handy book, tucked away in the very smallest print at the bottom of a column, as though it were a matter of extremely little import, you may find the laconic statement : ‘ It has been estimated that the earth can maintain a population of 6,000,000,000, a total which will be reached about A.D. 2100 at the present rate of increase.’

“ Of course, no one who has the very slightest

acquaintance with statistics can fail to be aware that their study is peculiarly beset with pitfalls. Brevity is the soul of Whittaker, and he does not cumber his packed page by giving us his authority for this estimate, but it is one which is in the main endorsed by a number of census and rate-of-increase figures drawn from different sources. Moreover, if it be only approximately correct—even if we were to allow it all possible margin of error—it would still seem to point to a situation in the near future such as man has never been faced with in all the ages of his history.

“The chief difficulty of arriving at any statistics which are to be relied on consists in the fact that for the Mongolian family, comprising a very large section of the human race, no figures touching the rate of increase are available. We can but conjecture the rate from that of other nations, chiefly of the Caucasian family, for which the figures are before us, from their observed expansion and from the accounts of their progress which can be gathered from themselves and from foreigners who have lived among them. Emigration from Western Europe, apart from the temporary interruption caused by the war, continues, but that of the Mongol yellow race is not nearly as large as it used to be. America and others of the new countries that still have much space to develop, have learnt that there are disadvantages attached to this invasion of the yellow coolies and are strenuously resisting it. If it was not for these untimely and Hunnish noises,” said Launceston, as a peculiarly obstreperous bombing began, “I would now

suggest to any member who shares my own boredom with statistics, that he go to sleep for five or ten minutes. Some figures are inevitable.

“ Mr. Longstaff, in his *Studies in Statistics*, deals closely with the figures of the population for Western Europe, but he leaves Russia and the Balkan peninsula alone, as factors too indefinite for his calculations. From the rest of the area under consideration he deduces a conclusion at which he is plainly and confessedly terrified ; so much so that in spite of the evidence he hardly dares to accept it. He finds (pp. 183 et seq.), writing in 1891, and in respect of the last thirty years open to his inquiry, an increase at the rate of 21 per cent., say $1\frac{2}{3}$ ths millions per annum, or 6·6 per cent. in each ten years. That is to say, that if the population of that area continued to increase at the same rate as from 1850 to 1880, it would arrive in 1990 at close on 455 millions. ‘ A simple calculation,’ he writes, ‘ shows clearly that the rate of increase (6·6 per cent. in each ten years) cannot possibly have been as great in the past, and that if it should be as great for another century the population will be increased by 200 millions—more than doubled—a result not, indeed, impossible, but one that taxes our power of belief considerably.’

“ Doubtless it is a conclusion which gives cause to think, but so far as the figures go their evidence is incontestable.

“ Dr. Newsholme, in *Elements of Vital Statistics*, brings the story down rather later ; but it is neither a strikingly different, nor a greatly more consoling story. He sets out at length the annual increase

per cent. of a large number of countries. The last period under his review runs from 1901 to 1905. New Zealand and Ceylon give the highest mean annual increase for these years, the former 2·90 per cent. per annum, the latter 2·16. Immigration obviously is the main source of their increase, as also in the case of Chile, which comes next in order with 1·96. The rate for the United States was 1·73. But these accessions are achieved without any undue drain on the older countries from which the immigrants are taken. England and Wales, in spite of their emigration, show an increase of 1·15 a year. Germany does considerably better with 1·17. The kingdom of Prussia is higher again at 1·58. France is extraordinarily low at 0·17, and Ireland shows the single instance of a decline, with minus 30 per cent.

“From the whole list compiled for these years and presuming the same rate of increase maintained, Dr. Newsholme calculates a doubling of the population of Prussia in 49·2 years, of England in 59·1 years, of Italy in 65·7, of Austria in 74·1, and of France, with her quite exceptional birthrate, in 591 years. Taking these figures one with another, they sufficiently show that, while filling the new countries, the old nations are very far from lowering their own population. We have put France in the above brief list as an example of the lowest—very considerably the lowest, seeing that Spain comes next with 0·45—rate of increase. Ireland, as we have seen, has, uniquely, a decrease. But if we were to estimate at one hundred years the time in which the population would double itself all the

world over, we should then find, putting the present world population at 1,623 millions, that in two hundred years it would come to 6,492 millions, and that we may arrive at approximately the result given in Whittaker of 6,000 millions in 2100.

“ There is another and rather different comparison, also indicating the rate of increase of population, given in Mulhall's *Statistical Dictionary*. His table is of the number of inhabitants per square mile in various countries in the years 1820 and 1890 respectively. The United States, as is to be expected, shows the largest increase, rising from three inhabitants per square mile in the former year to twenty in the latter. Germany has nearly doubled its density in the same interval, but still stands at only 233 to the square mile. England, next to the United States, shows the largest addition, with 505 to the square mile in 1890 as compared with 207 seventy years before. Belgium's density is the highest, with 530 to the mile, and she has nearly doubled in the period under review. France shows an increase that is rather astonishing when compared with the figures given by Longstaff—though, of course, the period is quite different—from 172 to 320. Russia (presumably the estimate is confined to Russia in Europe) has rather more than doubled, with 42 inhabitants to the mile in 1890 as against 20 in 1820. In the latest edition of the *Encyclopædia Britannica*, Mr. W. A. Phillips writes, under heading ‘ Russia ’ : ‘ The population of the empire, which was estimated at 74,000,000 in 1859, was found to be over 129,000,000 at the census of 1897, taken over all the empire except Finland.

In 1904 it was estimated to be 140,000,000, and in 1906, according to a detailed estimate of the Central Statistical Committee, it was 149,299,300. Thus from 1806 to 1897 the population increased $74\frac{1}{2}$ per cent., and from 1897 to 1904, 26.3 per cent., an average annual increase of $2\frac{1}{4}$ per cent. during the period 1860-97.'

"The latest available information puts the population of the Russian Empire at 173,500,000. Ireland again provides the single instance of a decline, with 212 to a mile at the earlier date, and no more than 148 at the later. For Europe generally Mr. Mulhall puts the increase from at 54 to 90.

"Webb's *Statistical Dictionary* brings up most of the figures given by Mulhall to a later date. In the 1911 edition he estimates the average number of persons to every square mile in Europe at 110, in America at 10, and all the world over at 31. He assumes the total world population, for the purpose of this calculation, at 1,610 millions, and presumably would confine his mileage estimate to what is considered the humanly habitable portion of the globe—excluding the Arctic and Antarctic extremes.

"This brings us back again to consideration of the number of human inhabitants that the globe is capable of supporting. Longstaff makes a calculation under this head, basing it on figures that he quotes from Dr. Parkes' *Manual of Practical Hygiene*. Dr. Parkes estimates that each human being requires, on an average, $5\frac{1}{2}$ bushels of wheat per year, besides animal food. And thence Longstaff makes

the deduction that a thousand square miles is needed for the support of each million of the population. It is understood that he takes the good with the bad land, for the purpose of the calculation, and strikes an average of the wheat-producing capacity. He concludes, however, with this warning, that the timber supply will be exhausted far sooner than the wheat supply, as estimated above, giving as his authority W. Little, *Forestry*, August 1883. Mankind, however, may conceivably exist in a dearth of timber. It may devise, it has devised, and is still further devising substitutes. But the bread remains the staff of its life—appears to be its imperative need.

“Of course, the difficulty of taking the census and of reckoning the rate of increase, even approximately, of an immense, loosely compacted and densely thronged empire such as that of China is insuperable. The best that can be done is in the nature of intelligent conjecture. Sir J. A. Baines, C.S.I., contributed to the *Journal of the Royal Statistical Society* for June 1911 a most interesting article on the taking of the census in India; but the machinery available in India is still far to seek in China. I think that is about all I have to trouble you with in the wearisome way of figures, so if anybody has been fortunate enough to be able to doze a little, perhaps he had better wake again.

“The more we consider all the statistics, the greater reason we seem to find for deeming the calculation, that the world will be congested with humanity in something less than two centuries

hence, not an inexact one. What I want to do now is to consider for a moment what that congestion must mean for us—or for our descendants of no very remote degree.

“ When a man of energy finds himself so cumbered and crowded to-day that there seems to be no room for him in this, his own little island, what he does—presuming the country not to be at war—is to take out the atlas, or apply himself to one or other of the many colonising agencies, and see where, around the globe, within or without the British Empire, he may find a pleasant and wider place. In a word, he emigrates. That is his solution of the crowding problem. And that is the solution which is going to serve us, of Britain, and those of other old European countries for a few more years to come ; but it is a solution which, unless the unforeseen should happen, must fail us round about the year A.D. 2100.

“ I do not know whether this strikes you as a point in some very far distant future. To me it makes rather the appeal of a menace as imminent as it is alarming. Of course, we may give these round figures a little latitude. By a score of years or so it is very possible that the actual congestion point may be delayed. It is equally possible that it may be advanced by a like short span. But what do a score or even fifty years amount to in the story ? Every advance we make in reading the history of Creation, as it is stored for us in the rocks, seems to throw back its beginnings to a more immeasurably far past. The very story of man himself, the youngest of all Evolution's

children, becomes respectably venerable in the pages of Dr. Arthur Keith's book *The Antiquity of Man*. I have quoted you him before. Arguing from the strata in which indubitably human evidences have been found, and from the estimated rate of deposit of the strata, he calculates a million years ago to be, roundly, the date at which a creature with a brain capacity which might entitle it to the dignity of being called human was first developed on the earth. What is almost more extraordinary is that so long as fifty thousand years ago Neanderthal man—that creature with a brain actually larger, though, perhaps, not so complexly convoluted, than our own, was already burying his dead with implements set beside the corpse in order to help the spirit on its journey to the world beyond. Fifty thousand years ago had he thus begun to listen to the intimations of immortality to which many of his near kin close their ears to-day. So strangely leisurely is the Creator at His work; so leaden-footed is the march of progress according to the tiny measures of time that we apply to it. Such an infinitesimal fraction of the whole are those two little centuries which infallibly, so far as we can see, must bring humanity to a point of congestion so extreme that no longer will the European, for whom the old world has no place, be able to say, 'I will go overseas. There is space for me.'

"Only two centuries, at the most, shall pass, and there will be no room for him. He will find footing, if at all, in a new land only on the condition of thrusting out from it—that is to say, thrusting

to his death—some previous inhabitant. Is the prospect a sufficiently appalling one ?

“ Of course, there is nothing in any way novel about a theory which merely supposes a tendency of population to increase faster than the means for its support. That the one progresses geometrically and the other arithmetically is the form—far too extreme—in which their mutual relation has been stated. It is the view specially associated with the name of Malthus, although, as Mr. Udny Yule has pointed out, it was no novel doctrine even then that Malthus preached. Indeed, it is Mr. Yule’s opinion that earlier writers, such as Arthur Young, were in advance of him. But it was Malthus who gave the view its emphasis and its wide publicity.

“ It has been held, as against Malthus, that man will inevitably check the natural rate of his multiplication when he begins to see it menacing him with imminent starvation, and in a few countries, as in France most particularly, there is a strong tendency to arrest the pace of increase. But it would be very unwise to build wide hopes on such local and very likely only temporary manifestations. The diminished birth-rate of France is, of course, taken into the calculation on which is based the estimate of the date of world-congestion. Unfortunately, the facts do not confirm the comfortable illusion held by Carey, the great American economist, in opposition to Malthus, that some vague benevolent influence tends to check undue multiplication. The popular belief that advancing civilisation automatically decreases the rate is quite untenable. On the contrary, we find Darwin writ-

ing in *The Descent of Man*, 'There is reason to suspect, as Malthus has remarked, that the reproductive power is actually less in barbarous than in civilised races. . . . I have shown in a former work (*Variation of Animals and Plants under Domestication*, vol. ii, pp. 111-113, 163) that all our domesticated quadrupeds and birds, and all our cultivated plants, are more fertile than the corresponding species in a state of nature. . . . We might, therefore, expect that civilised men, who, in one sense, are highly domesticated, would be more prolific than wild men. It is also probable that the increased fertility of civilised nations would become, as with our domestic animals, an inherited character.'

" Obviously, we have to give up any prospect of a modification of the stress, which we might have been disposed to base on a natural tendency of civilisation to lower the birth-rate. So far from that, its trend is precisely in the opposite line—to heighten it. And the death-rate, coincidently, is lowered by better care, better medical treatment, better sanitation, better food—by all the advantages in the struggle for life that science can put at man's disposal.

" Nor does there seem any better reason to suppose that the modern migration from the country to the town will have the effect of diminishing the pace of increase. In the same number of the *Journal of the Royal Statistical Society*—that for 1906—from which I took the comment cited above of Mr. Udny Yule on Malthus, Mr. Yule observes (p. 63) that 'urbanisation is not, *per se*, a cause

of lowered birth-rate.' The whole paper is well worthy of study in connection with this question. The writer discusses the effect of 'trade cycles,' of varying prosperity, on the marriage-rate and on the birth-rate. And in every consideration of the general subject the oft-quoted dictum of Dr. Farr has to be borne in mind, that all who are born must come one day or other to the 'Urn of Death.' There must be this intrinsic difference between birth and death—that the former event may happen or it may not, but the latter is, humanly speaking, a certainty.

"In whatever direction, then, we may look for our facts and figures, and granting all the latitude possible to the conclusions towards which they point, we nowhere find reason to depart at all widely from the deduction stated that the year A.D. 2100 must find the space of the world filled by man to its extreme capacity.

"People are apt thoughtlessly to suppose that the loss of life in a great war will seriously affect the issue; but fearful as the slaughter in this vast contest is, what, in sum, will it amount to? Even putting it at the very high figure of ten millions, first to last—what is even that in comparison with the numbers of our present world population? For how long is it to defer the day of final congestion? It is obvious that its effect is hardly considerable.

"At the date of Malthus' writing it was scarcely possible for him to look forward so clearly as we are able, and are even compelled, to look towards the final world congestion. The problem presented

itself to him in rather a different form. The multiplication of humanity since his time has been so rapid that it has assumed another aspect. We speak to-day in a Darwinian, rather than in a Malthusian, sense of the struggle for life ; and that struggle has been, we fully recognise, of the essence of all evolution. Man, with his acquisition of reason, gained so immensely over all the rest of creation that the story of the last million years has been principally the story of his winning the kingship over them. Save for certain insects and microbes that still defy him, largely by virtue of their very minuteness, all others have been compelled to yield to him. That struggle lies behind him. The time has yet to come when he will engage in the most direful struggle of all—the veritable Armageddon—the struggle for life and for food with his own kind. Humanity, as it would seem, may still expect something like two centuries of respite before congestion becomes world-complete, yet with every increasing generation the stress must grow the tighter.

“And during those centuries, in what manner, we may ask, will man proceed with his evolution ? Changes there will be, no doubt, but in one essential matter we may be very sure man will not change. There will be no modification worthy of entering on the final balance sheet in that which we commonly term his ‘human nature.’ Fifty thousand years ago, as we have seen, man was already burying with his dead their viaticum to another world. The space of two centuries is a very inadequate span for the working of any considerable alteration in

the nature of a being whose development proceeds at the rate of which this most significant fact gives us some idea. Those critics are vastly wrong who deny all moral advance to human nature. Despite all the cruelties of the present war it is unthinkable that white men could now enjoy the spectacle of those gladiatorial shows in which the Romans had delight. The very fact that such a crime as the sinking of the *Lusitania* horrified the whole world indicates a world-wide advance and quickening of the humane sentiment; but that progress is not set at a pace which will affect a modification of any importance in the brief space between to-day and the day of ultimate congestion.

“Very greatly swifter is the pace of scientific invention and the development of the infernal machine. It is indeed conceivable, though whether it is a conception to afford comfort may be more than doubtful, that the next century or two may see the discovery of some death-dealing influence or force such as Bulwer Lytton prefigured in his *Vril*—that fatal electrical emanation which a child could wield and which would carry death illimitably. It was, as it were, a wireless telegraphy of deadly voltage. The imagination shudders at the prospect of such a power in the hands of a being so utterly unfit to be entrusted with it as man even to-day is proving himself to be, yet it is a prospect of which we shall do well to recognise the possibility. It would be a stultifying conclusion indeed of all man’s conquest of world forces if he were finally to employ them to the total destruction of human life upon the planet, and not of human life alone, but of

every living creature whose sensibility was sufficiently developed to react to the deadly influence. It would, indeed, be a dramatic *dénouement* of the world play, thus to rid the stage of all its actors save the very lowest forms of life scarcely evolved from protoplasm. Terrific and catastrophic as such a conclusion may be, it is not beyond the horizon of sane philosophy. Then, when the stage is swept, the drama of evolution might conceivably recommence from the opening scenes to work itself out anew to who shall say what similar or what widely different conclusion ?

“ We do not need to travel so far into the region of conjecture so speculative—though still perfectly rational—as this to foresee a future that shall try the steadfastness, the courage, the organisation, the self-control and every highest quality of humanity as these have never before, in all man’s history, been put to the proof. To-day we are filled with wonder at the madness and the wickedness of Germany, which has thrown nearly the whole world into misery unspeakable in a war wholly unnecessary. War in 1914 was in no sense a necessity for Germany, for the German, crowded in his native country, had but to go across the sea and there was ample room for him. In every land he found a footing, and well knew how to maintain it. With the passage of another century and a half that free footing will be his no longer. He and every man going from his own land will need to fight to gain a place in another. What is to be the issue ? Is it possible to doubt it ? Can we question but that the issue will be war, bitter war, war not of

a nation's choosing, but thrust almost of necessity upon nations to conquer the very room to live? Conceivably it is possible that, should they perceive the imminence of an invention such as that 'Vril' fluid above noticed, the nations of the world might impose upon themselves a self-denying ordinance, prohibiting its use, breaking up the mechanism of its manufacture even as machines were destroyed as illegal engines by the wisdom of the rulers in Erewhon. That is a possibility, though recent experience does not encourage the hope of an adherence to ordinances of the kind. The proved disposition of warring humanity is, rather, to avail itself of every most devilish mechanical and chemical agent that science can contrive. It is vain to build on any tenderness or mercy in our poor human nature, or to expect any change of heart in so short a time.

"The battle, then, the inevitable battle which seems almost of necessity imposed, can hardly fail to be to the strong. It looks as though that nation or that race which is most populous, most prepared, most ruthless, is the nation that shall win and shall possess the earth.

"The preliminary skirmishes, it is to be presumed, will be not so much in the nature of any battles of giants as of the pitiful destruction of the lower races and of the less effective peoples. There will no longer be space to allow to the Red Indian his 'Reserves.' More and more will the white man thrust the man of colour—no matter what the hue—out of his rights as fellow-man. Gradually will he be shifted altogether from the scene to make way

for the more serious drama in which the best-equipped and strongest nations will compete for final dominance.

“Some years ago Mr. Pearson startled the West with his theory of the ‘Yellow Peril,’ enunciated in a book called *National Life and Character*. It was written before the Russian-Japanese War had revealed the surprising power of the island yellow race. Its point was the menace to the peace and the civilisation of the West which the writer conceived would become imminent when China, with her vast population, awoke out of her stagnation, availed herself of the discoveries of Western science and ranged herself for battle according to Western models. It was a forecast which had some vogue in its day. Its essential error was that it took no account of the element of time in its conclusions. It debated human problems as if conditions were to remain unchanged almost indefinitely. It forgot that the moment was fast approaching when the world would be full, when the increasing nations must fight for the very right to live, when it would be too late for China to stir from her long sleep, when all that those newly awakened eyes could perceive would be the conqueror entering into possession and thrusting her out of existence by the power of his better equipment. It is now scarcely conceivable that she can stir so quickly and so effectively from that long sleep as to be a dangerous element in the wars for the world’s final settlement.

“It is increasingly likely, as locomotion and communication become ever easier, that the lordship of a world thus virtually reduced in its

dimensions shall fall into the hands of one sole authority. The extent of the Roman Empire, held all under one hand in the days when the Emperor's edict ran no faster than a horse might gallop, is a fact far more surprising—viewed in its right perspective, a fact far bigger—than would world domination by a single Power be even to-day. And still less will such world domination be matter of exceeding difficulty or wonder with the scientific improvements likely to be available for man's use two centuries hence. It seems almost certain that we have to foresee the strongest nation dominating, decimating, finally destroying all those that are weaker, until that nation itself shall eventually replenish the whole habitable surface of the globe.

“ And, once again, thus arriving at the end of yet another chapter of the story, we have to ask ourselves, ‘ What then ? What are we to find when we once more turn the page ? That the struggle which has so far been for national predominance and possession, has to take on itself a fratricidal character—brother fighting brother for a living space upon the earth ? ’ It is difficult to see how it can be otherwise.

“ Out of the welter what is to issue forth ? What *modus vivendi* in the form of a strict regulation of the birth-rate to match the death-rate will these world masters contrive so that conditions be not altogether intolerable ? These are questions to be asked—for them, not for us, to find the answer ! More than enough for us to realise that before such an extreme of congestion can be reached life, as we to-day envisage and

enjoy it, will long have ceased to be worth the living. The 'open space,' 'the lungs of the cities,' will have been claimed years before for the inexorable necessity of growing food or of building dwellings upon them. Either that or man must become again a race of troglodytes, living beneath the earth, in a manner more or less prefigured by the life in the deep prepared trenches separating the battle-lines to-day. Dwelling beneath the earth and growing his food-stuff upon its surface, man for a while may cheat the fate with which the world congestion threatens him. It can but delay for a brief while the supreme hour. Save for a cataclysm which shall destroy terrestrial life as fatally as any development of the 'Vril' or the like power of human device, a new man will be able to find place on the earth only on condition of thrusting another off it. That, so far as his life on earth can take him, is the destiny towards which man quite manifestly is moving. Well, indeed, might Huxley say that evolution promises us no millennium.

"It is a destiny from which two lessons, at least, are no less manifest than the fact itself.

"The first is a lesson which may point man more emphatically to the recognition that his ultimate destiny, the destiny which really matters, is not an affair of this earth at all. If this were all, then evolution, far from being on the road towards the millennium, would be an age-long journey to no goal at all, a means towards no end. A few may still, in spite of clear vision of the terrific stress that has to come, believe in the ultimate perfectibility of man upon this earth. They are souls endowed with

a patience and long-sufferance that are passing marvellous when we consider that Neanderthal man, fifty thousand years ago, was already so far advanced in thought as to hold distinct views of an after-life, and when we consider, beside that curious picture, the long space which seems to separate humanity from perfection to-day. With that comparison in mind, the believer in terrestrial perfectibility must appeal to most of us as a being gifted with an optimism that we can admire, but cannot hope to imitate.

“ That, as it seems to me, is one of the lessons—pointing us a truth which a cloud of other witness presses on us, that the final destiny of man is to be achieved in an environment other than that of the planet of his present pilgrimage. The other is of a more material character, and our readings and acceptance of it will depend on the view that we may happen to take of the conclusion of the terrestrial story. Is the inevitable struggle to be worth the waging ? Does it seem to us better that we shall be of the surviving, the dominant, or of the beaten and of the extinguished race ? Is the life that we can see imminent for our posterity to be worth the living, or is it not ?

“ Acceptance of the latter alternative is by far the easier way ; it is the way of Mary, rather than of Martha, and we know what has been said in that regard. But, in the circumstances, it is also the way of national death.

“ Are we prepared to accept this conclusion, and to welcome it as the lesser evil ? If so, very well. In that case we have no need to put our house in

any particular order. We may leave it in the hands of fortune. But if we prefer the former choice, if it be our resolve to take our strenuous part in the struggle, and, God helping us, to play eventually a dominant rôle, then, on the other hand, it behoves us to look to it very carefully that we are so organised, so prepared, that the day of battle shall find us at all points armed.

“ I know the first comment will be that it is useless, even fanciful, to look so far ahead. That is a comment most characteristically British. Whatever our virtues, and we believe them many, as a nation, that of long-sightedness, or of even a moderate quality of foresight, is not to be reckoned among them. There is only one nation of modern times that has shown prevision in any conspicuous degree: that is Germany. We commonly say that we cannot understand the madness which incited Germany to declare war at the moment when she chose. As the event is proving, it was not the most auspicious for her particular purpose. But that purpose, which was no less than world domination, was thwarted by one mistake only in her calculation, the mistake of deeming that Great Britain, with Ireland, was too internally distracted to unite against a common foe, and that the tie which bound the Colonies with the Island Mother was not stout enough to stand the strain of war. Had this calculation not been a mistaken one, Germany's immediate objects in the war would have been attained at comparatively little cost. No one who has intelligently followed the course of events in the great struggle can well have any

illusions in that regard. It is almost as impossible to doubt, seeing the powerful German influence revealed in the South American States, that it was her more ultimate purpose to establish herself as dictator in the United States likewise, challenging that Monroe doctrine which the States were in no condition of naval and military readiness to uphold. Finally, she had but to harness the Balkans and Turkey to the wheels of her war-chariot in order to drive it in triumphal procession around the world. Her Eastern and her Western triumphs would have joined hands. Russia, enclosed within her own vast borders, would have been as inert as the United States. Germany's world dominance would have been complete.

“ This is a grandiose scheme, but, grandiose as it is, they are surely blind to the logic of events and of demonstrated fact who can doubt that it was the scheme quite reasonably considered in the German mind—reasonably, because, save for Great Britain's intervention with her sea power, it would have been even now in full course of realisation. It is, in fact, a huge failure, but it wanted only a little of being a huge success. Now Germany, among all modern nations, is most richly endowed with foresight. For fifty years, as we now know, she has been working with world domination, no less, as her goal. She is also—it is a large factor in her successful prevenience—endowed with the statistical talent. It is not to be supposed that her statisticians have failed to work out the simple sum in world acreage, in population and its rate of increase, to its arithmetically certain conclusion

of world congestion in or about the beginning of the twenty-second century. Neither is it to be supposed that she did not have this conclusion vividly in view when she opened her campaign against the world's peace in the autumn of 1914. Had that campaign gone according to her perfectly reasonable expectation there is no question possible as to the nation that would have conquered in the final Armageddon to settle the mastery of a world crowded to the very crisis of its life-supporting power. In that case there would hardly have been an Armageddon yet to fight. In that case she would have swallowed one day, in a small morsel, Great Britain, after all our present European allies had been reduced to impotence. America, a vast helpless Colossus, would have been bound and fettered in due course, and the Junker would have triumphed as the insufferable tyrant of a stricken earth.

“Happily, as becomes increasingly manifest, God in His mercy had other destinies for mankind on this planet. The real Armageddon is perhaps still to fight, and may be set in array before the first hour of that fateful twenty-second century shall strike. Is the idea of looking thus far ahead too fanciful to be entertained seriously, or is it only our national incapacity to see further than the length of its own nose that will condemn such an idea as vain and unpractical? By ‘practical’ we are nationally ready to signify those things only that lie immediately before our eyes, and to deride as ‘imaginative’ those which loom in the future. That has been our British way, and it has cost

us very dear. But even the most practical can scarcely criticise as 'imaginative' a future to which those dull things, dear to the practical mind—figures—bear their arithmetical witness, not to be impeached. If no planetary change or convulsion intervenes, if the present rate of increase of population is at all maintained, it is as clear as facts and figures can make it that the world will be so fulfilled with humanity as to leave no room for further increase in or about 2100. There is nothing imaginative in this forecast. Imagination may indeed begin to exercise itself, and it is very well that it should, on the happenings that are probable as a result of that congestion, and on the means that it behoves us, as a nation, to take in view of its certain imminence. And if the imagination thus exercised does not suggest the probability that these happenings will be terrific and tragic beyond all that has been known in the story of the world before, then, as it seems to me, it must needs be imagination conjoined with a gift of optimism that is greatly to be envied.

"But in sober truth it is no great way forward to look. Already, without an adequate conception in their minds of the real Armageddon that has to be, people are speaking of the present war that we are waging as 'for the sake of generations that are to come.' A very few of these generations will have come and gone before the stress of this very much more serious struggle is upon the world. 'For what,' we sometimes ask, 'are we fighting now?' And we answer readily enough 'For liberty, for the right to live free.' But if we ask

for what our children's grandchildren—it is not likely to be much further deferred than that—will be fighting in those days to come, the answer that we have to make is obvious: 'For life, for the right to live at all.' It will be no less a necessity than this: they will fight for space to live.

"And with a future so immediate and so inevitable as this spread plain before their eyes we may yet hear people speak with smug complacency of the course of the world after the war, as if humanity's development were to continue on it in precisely the same conditions as in the past when man was fulfilling his destiny of replenishing the earth. They are blind, as it appears, to the obvious, the necessary and the very drastic changes in the circumstances when that part of his fate shall have been fulfilled and when he shall proceed to the next and infinitely shrewder problem of his life in an already fully replenished earth. It is not an amusing prospect. But what would be amusing, were it not pathetic, is the talk of the 'general disarmament' and of the 'abiding peace,' which are to be among the natural consequences of the satisfactory termination of the war. Such talk is rife, and, pitiful as it seems, there are talkers who believe in what they say. More pathetic still, in days of a not very remote future, will be the fate of our people if they and their rulers allow themselves to be hypnotised by the suggestion of this smooth folly, if they fail to realise the situation towards which humanity is most inevitably working, fail to prepare for the dire clash that is assuredly bound to come."

CHAPTER XVII

A BOMB-SHELL

"It's an awful suggestion—a fearsome prospect," said Davis, as Launceston wound up his address. I suppose that just about expressed what all of us thought—'a fearsome prospect.' "But it will never happen," Davis continued, "never. I believe better of the Power that has the guidance of the world than to think it. Never!"

"Now there," Launceston exclaimed irritably. "Isn't that just of a piece with all the silly optimism that believes nothing is going to happen which is unpleasant? Isn't it just like the silly optimism of people before Germany plunged us into war—'A European war! Oh, it's such a dreadful thing, it'll never be allowed to happen! We must think better of the Power that has the world in hand!'"

Davis had no counter ready. Launceston touched him on a tender spot here, for he was one of those who had emphatically voiced the pleasant illusion that no calamity so dreadful as the Great War would be permitted. With the skill of a young parliamentary hand he changed ground. "Are you meaning to tell us," he asked, "that it's no value to a nation to have a large population? That would seem a natural inference from your position.

Yet look at our present position : what is it that our generals in France are crying for ? Men—men—men ? ”

Launceston countered with another question. “ Have I not heard you say this was to be the last of wars, that the era of democracy which it is to introduce is to be an era of world peace ? Isn’t that your view ? ”

“ Certainly it is my hope, and—yes—I think I may say that it is my view.”

“ Let us take your view then, as our basis for argument. What is it that makes men of value now ?—war. Men are valuable as fighting material, just as guns and munitions are valuable. But men in the days of the world peace which you tell is to come will not be of value, any more than the guns and munitions. Of far less value indeed, and much more readily to be spared, because a man eats and a gun does not. In a world at peace and rapidly approaching the congestion point the room of a man will be of far more value than a man.”

“ The food resources of the sea which are almost unlimited have hardly been touched yet,” Davis replied.

“ Oh-ho. I have hunted you off the firm land, have I ? Well, I will grant you there is much more harvest to be reaped out of the sea yet. Still, ‘ unlimited ’ is no word for it. There are wide tracts of the sea where there is no life, both surface and depth tracts.”

“ But, bless my soul, my dear fellow,” Foljambe sputtered in, “ I never heard such a pack of nonsense in the whole course of my life. You don’t

need to go to sea to look for your tracts. You haven't made allowance for the immense tracts of land that are now uninhabited, or with only a very small population—South America, Africa, Australia, Siberia, Canada. Why, I don't believe that at the present moment the world's half populated—not half."

The welcoming smile with which Launceston greeted this intervention might have given Foljambe suspiciously to think. A look of outraged surprise took the place of the smile as he replied: "What? Do you mean to tell me that you really think there is actually half the available space of the world still unoccupied—really *half*?"

"Yes, I do," he said, "yes"—defiantly, as one who braces himself to a great and most daring expression of opinion. "I really do believe that there is still half the world available for man to live in."

"And that would mean, then, that there is still room in the world for double the number of people that are alive on it at present?"

"I am ready to assert that, too—that in all probability there is room in the world for double the number of people that are in it now."

He thrust out his under-jaw, bull-dog fashion, and looked at Launceston to see how he would stand such an audacious avowal as that.

"Are you really?" Launceston answered. "And all the argument that you have just been hearing aimed at showing you that if there were room for no more than double the people that are in the world now, the world would be full up to the limit

of its capacity for supporting human life not in two hundred but in one hundred years. Population at the present rate of increase doubles in one hundred years. It increases fourfold in two hundred. The whole argument is based on the assumption that the world is capable of accommodating not twice its present population, but four times."

A sputtering attack of unusual virulence was Foljambe's only answer. It was Launceston who again took up the parable :

"I am not claiming," he said, "that very large spaces are not still open for humanity—very large opportunities both by land or sea. All I say is that they are limited, strictly limited, whereas the increase of humanity is—so far as we see—not limited. Mark you—you who are no arithmeticians and do not grasp the law of geometrical progression—at the present rate of increase population doubles in one hundred years. That means that in the next hundred years it will have increased by 1,500,000,000, making 3,000,000,000 in all. That is not much, you will say—there is space and food for them. But take the next hundred years. The increase, presuming it continues at the same rate, in that century, will be not 1,500,000,000, but 3,000,000,000, or a total of 6,000,000,000. Will there be room for them?—Perhaps. Possibly. I think not. But even if there be, let us take, if you please, another hundred years—even so we come to only three hundred years forward—and at the end of that third doubling we find the number of humanity grown to no less than 12,000,000,000—a number which no human being in his senses can

suppose for a moment would find sustenance on the earth."

There was no further discussion. The conditions gave little of the calm that favours philosophical debate. We had carried on, with much gallantry, before, on air-raid nights, striving to emulate the famed detachment of Archimedes, but this night of the nights the bangs and rattling sounded nearer and more incessant than ever before. The meeting broke up. Still, few of the members cared to risk the journey to their homes. A roof did not give effective security, but it was better than the open heaven at such times. Launceston, whose rooms, as I think I have said, were just across the street, made a bolt for them. Sir James Macadam, who had his bedroom in the Club, climbed up the private stairway leading to it with the avowed intention of putting his head under the clothes as soon as possible. The rest of us talked together, starting uncomfortably at each report, and feigning to hear nothing and to be not in the least perturbed.

In the midst of this game of pretences, which deceived nobody, came a crash that was perhaps not louder than many which we had heard that night. Yet we all stared, or so it seemed to me, into each other's faces as if with a knowledge that something different from the happenings indicated by the other noises had happened now. The report was not extraordinarily loud, but it came with an accompaniment of crash and rattle which distinguished it. The whole house shook as if a huge Cyclops had given it a fist blow. In an instant we

were aware of an appeal to another sense : rather a sweet sickly smell came to our noses.

We were in the large room that gave on the hall, and at once someone opened the door and we hustled each other out. The hall floor was a mass of roof and ceiling wreckage. On the side farthest from the front door a sheet of smoke licked by quick tongues of flame already went up to the ceiling. One is stupid, I suppose, at such crises, for I did not realise what it all meant till someone exclaimed, ' Fire-bomb,' and then it was obvious. The bomb had come through the roof and buried itself in the floor near the bottom of the stairway leading to Macadam's rooms.

How things happened then I hardly know. Someone telephoned to the fire-station. Someone else went out to the fire-call place. Others organised a chain for passing water from the next house and throwing the contents at the flames. But they seemed to surge the more, with denser smoke, at each bucket discharge.

And then someone shouted, " Macadam ! Macadam's up there ! He'll be burnt to death."

A dozen or more of us shouted " Macadam ! " and " Fire " at our loudest, but the tinder-dry wood of the old house went crackling and the flames began to make a roar, and not a sound of response came. The staircase was by now impossible even to reach, far less to ascend, for the flame and smoke.

At that instant Launceston came in by the front door. He took in the position at once. " What ! " he exclaimed, at his shrillest. " Is that poor old fellow up there and you're all doing nothing ? "

Before one had time to answer he was gone. In another minute he was back again with gas-mask on and in his hand a coil of rope. He dashed in, thrusting us aside. Someone called "Stop him!" but before a hand could be stretched out he was through us, through into the midst of the volleying smoke, the tongues of flame, on the staircase. There was a glimpse of him, as he got the door at the stairhead open and the smoke pillar bent its head as if to follow him in. I suppose there was a draught through the opened door.

There followed some moments of awful strain. Then some sort of commotion, change in the draught again or something, happened at the stairhead. An object came banging down the stairs. It was the end of the rope-coil fastened about a heavy book. Then Launceston's high voice, like a scream: "Pull, pull—pull like hell."

It seemed more like hell than anything earthly as we tugged—eyes stinging with smoke and throats choking—at some dead weight which gave to the tug and presently with a bump, bump, bump, was descending the stairs. Next we pulled the bundle through smoke and splintered wood and plaster fragments to the front door, and hardly even at that tragic moment could one help laughing at the spectacle—an immense roll of heavily smoked bedclothes, coiled about by the rope, and within it, as we hurriedly undid it, like a vast grizzled baby, lay old Macadam, scarcely conscious, but breathing—breathing very hard indeed, as well he might, between smoke and blankets,

Pershire was at him directly. "He'll be all right," he said. "But Launceston——?"

Launceston had not reappeared. We tried questioning Sir James, but the old man was still dazed. The one obvious thing was that Launceston had not come down. By this time the stairway was plainly impossible—a mass of smoke and flame. At any moment it might collapse. Several together shouted Launceston's name and we listened intently for his thin notes to pierce that roar and the crackle. But since that last "Pull like hell" we heard nothing.

A voice at the door exclaimed, "Good God, what a scene! Anyone hurt?" It was Davis who had just started for home when the bomb fell.

"Launceston," someone answered. "In Macadam's room. He must be dead by this time."

From behind Davis, as he stood peering in, came a quiet voice in a high pitch: "Sorry to disappoint—not yet."

"Launceston!" "Launceston!" one exclaimed and then another.

"By all that's wonderful, how did you get here?" Pershire asked.

"By nothing more wonderful than a fire-escape. They've got an engine in the back street. Look out!"

The first activities of the engine inspired his warning. A jet of water directed by some salamander at Macadam's window drenched and nearly felled those standing farthest in the hall.

"Bring him over to my rooms, some of you," Launceston said, pointing to Macadam, still half

buried in his blankets ; and at the moment that we carried him out another fire-engine dashed up the front street and prepared to direct its energies through the door. Working from back and front together they got the mastery of the flames.

Meanwhile we had laid Macadam, still, by Pershore's counsel, keeping him prostrate, on the floor of Launceston's dining-room. He was regaining his wits.

"Launceston, my dear fellow," he said feebly, reaching out a hand to him. "You saved my life."

"A thoughtless impulse," Launceston answered carelessly. "I expect I often shall regret it." But the lines of his gaunt face softened in a very kindly smile as he laid his hand on the outstretched one.

CHAPTER XVIII

THE SUMMING-UP

THE damage done by the bomb was curiously small in area, but curiously complete within its area. The stairway to Macadam's rooms was entirely destroyed, and there was a hole, not large, in the roof and the top floor, but very little injury elsewhere except broken windows. Had it been an explosive bomb and not a fire-bomb no doubt there would have been another tale to tell—and another teller, for I suppose it would have killed us all. As it was, the hole in the roof was patched in a wonderfully short time ; the broken panes remained unmended for a wonderfully long time, because of the scarcity of glass. But most of the Club was very soon habitable, under electric light, for of course the boarded-up windows let in no daylight. Our big room was quite intact, and on the Thursday fortnight after the bombing Launceston was once again and, as he announced, for the last time, opening a debate for us exactly as if no missile from the Huns' aeroplane had come amongst us.

Very different was his greeting now from the coldness of his welcome a fortnight before when the members were righteously bitter about his insult to Sir James Macadam. The position in respect of that insult was not verbally altered, but a single

deed had changed it as no number of words possibly could. Macadam was still temporarily lodging under Launceston's roof, not at all the worse for his smoking.

When Launceston got up to deliver his address a storm of applause welcomed him. Such a greeting had never been in the history of our very decorous assemblies. He had appeared perfectly indifferent to the unconcealed coldness of his last reception, but even his aloofness was not proof against this demonstration. Those near him said that there were tears in his eyes. I did not see this, but I know that his voice was very shaky and that he could hardly make his first sentences audible.

"He did not propose, he told us, to suggest any new topic, but to review and summarise the substance of some of his former papers. "You have listened to me," he said, "with great long-sufferance, and I faithfully promise that when I have inflicted one final discourse upon you to-night, I will, so far as any opening addresses are concerned, for ever after hold my peace.

"In some previous remarks I suggested a considerable revision of the commonly received views on three details of the story of evolution on this planet, and then I endeavoured to show reason to think that the drama had not been left to work itself out, to its present state of imperfect development, without guidance and redirection by its Creator, but that a recreating hand had, at more or less definite moments, made an alteration in the piece, by introducing a new force. The latest force I

suggested to be spirituality, in the sense of felt communion by man with God.

" I even ventured the conjecture that in this communion, considered in the light which evolution throws upon it, we may find the key to the enigma of God's purpose in terrestrial creation and to those problems of moral evil and of pain which have clamoured for solution ever since man began to regard himself self-consciously.

" Granted that the world, with man as its most finished product, was to be made by way of evolution it seemed explicable, intelligible, perhaps inevitable, that both pain and moral evil should have place in it. There remained still that which I then called the question of questions ; ' Why evolution ? Why did it please the Maker to make man by this long, sinful, and painful process ? '

" Evolution, as it seemed, could give reason for everything except itself ; could solve all puzzles except its own.

" But it also appears possible that in the evolution of human spirituality we have the key to this last puzzle, this question of questions, also.

" I will ask you at least to consider if it may not be so ; if on this hypothesis the whole universe do not hang together ; if it do not here find a meaning, a motive, an end and also a beginning ? For I would have you note this, that, though I have spoken of this ' Why evolution ? ' as the question of questions, there is really one, more ultimate still, which lies behind it : ' Why creation ? ' Not only why was man made just in this way, by this long

process, but also, and more ultimately, why was he made at all ?

“ It will appear that I am taking it for granted that it was for the sake of the making of man that the whole terrestrial scheme, and probably much of the extra-terrestrial also, was put on the stocks. It is a large assumption, some will say, but I believe it impossible, for us, to accept any other.

“ But I am disposed to assume very much more than this—by way of an hypothesis only, if you will, but of a working hypothesis, and, in my opinion, the only hypothesis which will work—namely, that the Creator made the whole of what we may call the terrestrial universe with the single purpose of producing a being worthy of this gift of spirituality, worthy for Him to hold converse with, a being whom His infinite mind may have relations with, relations as yet very little realised by man living here on the earth, but relations that man after his terrestrial death may hope to find far more vivid and more direct, and relations which, even on the earth, men who come after us may be able to make far more strong, close and clear as the education and practice of their spirituality progresses. Just as it was first with sensitivity, then with intellect ; so too, as I believe, will it be with spirituality.

“ Remains still, however, that which I called the question of questions. Why was it by way of evolution that the Maker chose to make the being that was to be given the privilege of communion, mind to mind, with Him ?

“ I will ask another question : Can we conceive that a creature made originally and at a single

stroke, perfect, could have as much value, could be as fine a product, judged by any standard which we, reasonable human beings, are able to apply, as a creature which has risen to a certain, perhaps very moderate height by its own exertion, by its own struggles against the lower impulse and by the effort to obey the higher? I think we can only answer that question in one way. We are obliged to ascribe more dignity, more worth to the one that has striven. And, judging thus, from our human point of view, we have to assume a like judgment on part of the Maker; for, as I have urged before, it is no reproach to say that our God is anthropopsychic. We are compelled to ascribe to Him the qualities, raised to an infinite degree, which we regard from the human standpoint as the highest for us. If we do not conceive of Him as in some sort anthropopsychic, we deny Him psyche altogether. We are compelled to think of His qualities in human terms simply because we know and can conceive none higher.

"We are to conclude therefore that the Creator also must set the greater value on the creature that has striven to rise, and, striving, has risen, than to one raised to the pinnacle at the first.

"From this point we entirely turn the flank of that most difficult fortress to take by any frontal assault, the conception of God's omnipotence as related to man's freedom—freedom to do wrong as well as freedom to do right. And at the same time we also outflank that other fortress, scarcely less impregnable to any other argument, the reconciliation of the existence of moral evil with a scheme estab-

lished by a God whom we acknowledge to be good. Unless God so limited the operation of His omnipotence as to allow this freedom to man, man could not be the creature struggling to rise. He would be the child tied to his nurse's apron-strings, not the responsible being. Man without freedom would not be man. Man without freedom to do evil could hardly be called good. Liability to do evil is really a condition of goodness in any human sense.

"So here we have the answer to the question of questions. It is the answer, at all events, which satisfies me. We may put it thus: by way of evolution, which is the way of pain and the way of moral evil, God made man in order that by the creature's strivings the creature might become worthy of spiritual communion with the Creator, a communion at first feeble and stammering but surely to be strengthened and made clear, far beyond all present imaginings, even in this life, and to find its fulfilment only when the terrestrial body has been put off in exchange for that which St. Paul speaks of as celestial.

"It may surprise you, as it certainly did me, but the conception that the death of the terrestrial body entered into the world through sin is one which some of the modern spokesmen of the Church have not by any means abandoned. Dr. Hall, in his Paddock Lectures, 1909 and 1910, affirms a conviction, and genuinely believes himself to have brought forward argument to support it, that 'man's original state was one of supernatural grace, in which he was enabled wholly to avoid sin and

to escape the physical death to which he was naturally liable.'

" Dr. Hall, it seems, can contemplate with satisfaction the unending life of man in such conditions as those described in the first chapters of Genesis as prevailing in the Garden of Eden before the Fall. Certainly if man were to be eternally happy in circumstances of the unvarying monotony there pictured for us, he would need to be a creature of disposition so entirely different from man as we know him that it would be better to find for him some other name.

" There is an eloquent passage in Dr. Fairbairn's *Philosophy of the Christian Religion* which draws a striking contrast between the conception of a being made, by a wave of the Creator's magic wand, perfect, sinless, deathless, and man struggling up through countless deaths, generations, and failures towards a high destiny. 'Death,' he writes, 'has thus added to the pomp and the fruitfulness, to the glory and grandeur of life. Without it we should have no struggle of will against destiny, of the thought which wanders through eternity and beats itself into strength and hope against the bars and the barriers of time; without it man would have had no sense of his kinship with the Infinite, for the finite would have been enough for him. And if a soul made for eternity were to be withered by time, would not that, in another and darker sense than attends the end of immortal being, be the death of all that is worthiest to live? And has not time, by her successive generations, been enriched, enlarged, made varied and wealthy as

she never could have been by a race of immortal Adams, unchanged and deathless? It is a poor and a pitiful dream to imagine that it was a happier than a mortal state were man to know no death, but to endure in characterless innocence, untouched by the shadow feared of man, never feeling the light within made resplendent by the darkness death shed without. Instead of a single generation we have a multitude of successive generations, each fuller of humanity than the one which went before. Instead of one individual we have an endless series of mortal persons on the way to immortality, each a miniature deity, each in time yet destined for eternity, each with inexhaustible potentialities within him, each realising himself under the conditions which a measured existence affords, and all contributing to make the wondrous and varied life which we call the history of man. Who will venture to say that the dream of an innocent Eden, a single paradise of immortals, is comparable to this majestic procession of mortals moving on to the music of a celestial Dead March through time towards immortality? ' ¹

"The passage is even a little too eloquent, but it has some fine things in it. In the crudest way we suffer rebuke frequently for our foolish conception of the relation between death and life even in creatures below man. We kill a rabbit, let us say, and leave it to lie, ungathered. Within three days we come upon it and, behold, its putrescence is a mass of living bodies! Killing one creature, we

¹ *The Philosophy of the Christian Religion.* A. M. Fairbairn, D.D., LL.D., 3rd edition, 1903, pp. 143-4.

seem to have created the conditions of life for a myriad. Thus are we mocked and rebuked, even by the unspiritual ; and when we come to man, who is a spirit, the rebuke and the mock are beyond all human measure louder and more emphatic. Death, for man, is not the end of life, as we absurdly look upon it : it is life's greatest adventure.

" I have spoken, on former Thursdays, of what seem to me the false perspectives which man is apt to take of several of the details of the universe and of his own story and prospects ; but of all his popular perspectives none, I think, is quite so false as that in which he generally regards the relations of life and death. It is in his common speech that we most readily detect him in his error. He sets the two terms over against each other, as though they were two natural opposites ; he may even be surprised that anyone should take the trouble, as I do now, to go out of my way to tell him that these two words do not, in any human sense, stand as symbols for opposite ideas. He will regard such a statement as absurd, and will persist that of course they are natural opposites and contrasts. His conception is that life has been given him only on the condition that it shall terminate in death : that death comes in as some terrible, yet inevitable catastrophe, after which he shall enter upon some existence tremendously new and strange—that is, of course, supposing him to be a believer in a life of the human soul after death. The gulf of death he must presume as vast. He envisages an end of life and a rebeginning.

" That is the popular view. The view which I,

rather, believe to be correct is that we are indeed given the gift of life, but that this gift, once bestowed, is never to be taken away if we do but use it wisely. It is not that immortality is to begin on the other side of that great gulf of death : there is really no gulf ; the gift has been given now, once for all. It is not to be taken away. We have it here and now, and we may have it there and then, death making no break in the life of the personality, but merely a change in the conditions, in the environment, in the mechanism by which the personality, the spirit, will continue its work.

“ As Professor Royce says of our terrestrial life : ‘ The purpose that can be fulfilled by the ending of such a life is necessarily a purpose that, in the eternal world, is consciously known and seen as continuous with, yes, as inclusive of, the very purpose whose fulfilment the temporal death seems to cut short. . . . The possibility of death depends upon the transcending of death through a life that is richer and more conscious than is the life which death cuts short, and the richer life in question is, in meaning, if not in temporal sequence, continuous with the very life that death interrupts.’ ¹

“ But this gift, this opportunity, is bestowed conditionally only. It is freely offered, but our rôle in receiving it is more than merely passive. A certain passivity, in the sense of banishing the preoccupation with things of sense and of intellect, appears, by common witness of all the saints, an essential condition to reception of the spiritual message, and a firm effort of will is needed to effect

¹ *The World and the Individual*, 2nd series, p. 440.

this banishment of worldly care and this quiescence of spirit. Moreover, the psychic guidance is rather 'a direction than a conclusion,' as Eucken has it. The 'eye' of reason is still needed, for its critical work, and our will and attention are to be bent to guide us in the altruistic rather than the egoistic path. As Professor Royce says: 'You are a Self' (a term which he uses as equivalent to 'the possessor of a soul') 'precisely in so far as you intend to accomplish God's will by becoming one; and you are an individual precisely in so far as you purpose to do your Father's business in unique fashion, so that in this instant shall begin a work that can be finished only in eternity.'

"He can say this, though he can also write that 'a frank admission of the natural origin of Self, and a study of its relations to the physical world, in no sense involves an abandonment of the idealistic point of view.'

"Not only has the soul to realise itself and receive the spiritual communion once for all: it has continually to renew, never to lose, that message. Let us be under no mistake in this. All evidence, all intimations point to an alternative of possibilities for the soul—of mortality or of immortality—even after its achievement of psychic life. It is surely this that is meant by the 'death of the soul' of Christian writers, which is the result of that 'sin against the Holy Ghost'—the shutting of the psychic channels against the spiritual influence. It is that 'destitution of the spiritual life' of which Eucken tells. From every school of thought, except the materialistic, quotation might

be made of reference in one or other phrase to this spiritual death, and all alike regard it as the worst that can befall man, his real death, bringing him again to that level of the brute from which it has been the work of a million years to lift him.

“ And now a very wonderful, but, as I think, very certain fact has to be noted, namely, that once the initial impulse to egoism is conquered and man gives himself freely to the service of his neighbours, experience proves that he receives a higher measure of happiness, even in this life on earth, than is ever the portion of those who seek purely selfish ends. There is no cant or affectation in such an assertion. It is a truth which any man may prove for himself by putting it to the test, or may convince himself objectively (if that is the way which he prefers) by taking stock of his acquaintance. It will be very strange if he is not driven to the conclusion that the happiest among them are those who are giving themselves most unreservedly to the service of others, and the most miserable those who are most self-engrossed. It is a conclusion which may lead us to suspect that if we had any means of gauging the comparative happiness of gregarious animals lower than man in development we should find that with them, too, the happiest was the one that obeyed the herd instinct most completely and gave least heed to the self-regarding instinct.

“ Of course, if reason could be convinced of this, and could accept it as a premiss, she would then have a perfectly good basis on which to furnish altruistic motives. It is, however, a truth of which reason

declines to take account. She cannot logically demonstrate it; and it is seldom or never that she thinks of dealing with it as any part of her stock-in-trade.

"Apart from the specially Christian lesson, the religious sense common to all Theism seems to tell us, *inter alia*, that a really enlightened egoism forbids us to act as if this life were all—that our real personal advantage lies in altruism—and thus, in the end, abolishes the distinction between altruism and egoism. When we look at life in the other world as but a prolongation of our terrestrial life the apparent discords are seen to blend into harmony. Mr. Balfour, as I venture to think, is less convincing in his *Theism and Humanism* respecting the relations between egoism and altruism than on most of the aspects of the immense question which he touches with his illuminating thought. On page 108 he tells us: 'Evidently there has been a profound moral transformation in the course of ages. None suppose that ethical values are appraised in the twentieth century as they were in the first Stone Age. But what has caused the change is not so clear.'

"It may be admitted that it is not absolutely 'clear'; but Mr. Balfour is arguing against the theory that selection is able to give a sufficient account of it. It is my own personal conviction, as it is also Mr. Balfour's, that altruism has been reinforced by other forces than those which the law of the survival of the fittest implies, but none the less Mr. Balfour's argument does not strike me as effectively overthrowing the position of

those who may contend that this law does give a perfectly good account of its beginnings. The tribe whose members would sacrifice themselves for the common good would surely have an advantage over tribes in which each fought solely for his own hand. It is perfectly true, as Mr. Balfour says (p. 115), that 'Altruism is not based on egoism; it is not egoism in disguise'; but when he proceeds 'the ends to which it points are ends in themselves; and their value is quite independent of argument, neither capable of proof nor requiring it'—we then may again admit the truth of his contention (I, at least, would cordially endorse it) that altruism issues in ends that have a value independent of argument; but still, if a man choose to take the other view and to maintain that the value of the beginnings of altruism is perfectly capable of proof, I do not see how we are able to convict his argument of error. Altruism is, truly, not 'based on egoism,' but it would be a great mistake to doubt that altruism issues in egoistic satisfactions.

" Elsewhere (p. 126) he writes: 'In so far as we do not injure lest we should ourselves be injured, in so far as we benefit that we may be benefited ourselves—just in that proportion we treat altruistic actions merely as the means of attaining egoistic ends. The two competitors are not reconciled, but a working arrangement is reached under which the conduct appropriate to the higher ideal is pursued from motives characteristic of the lower. Is any truer reconciliation possible? Scarcely, as I think, without religion. I do not suggest that

any religious theory gets rid of ethical anomalies, or theoretically lightens by a feather-weight the heavy problem of evil. But I do suggest that in the love of Good by the individual soul, the collision of ends *for that soul* loses all its harshness, and harmony is produced by raising, not lowering, the ethical ideal.'

"We may be in perfect agreement with all this, and yet may remember that in our discussion of Conscience we seemed to see the gregarious animal, even of a lower type than the earliest man, finding a satisfaction in obedience to the altruistic motive supplied by the 'herd instinct,' and therewith a certain reconciliation (to be immensely reinforced by spiritual aid at a later stage) of the egoistic and altruistic motives.

"The very final sentence of this same lecture, 'Ethics and Theism,' indicates very clearly the cardinal point of Mr. Balfour's view: 'Ethics must have its root in the divine; and in the divine it must find its consummation.' In a certain sense we have to deem it true that ethics, like all the rest of creation, material, psychic, or whatever it be, has 'its roots in the divine'—is divinely created; but this is scarcely the lecturer's sense here. His meaning would seem to be that we cannot perceive a root, a source, for ethics in man's terrestrial conditions considered socially and biologically. But surely that is just where it does seem possible to find its roots, though for the perfection of its growth it is a plant which truly enough needs the rays of the divine sun. With the last clause that 'in the divine it must find its consum-

mation ' we might think that there could be no possible disagreement.

" And now I wish, by way of conclusion of the whole matter, to say a word about the only justification that we are able, without self-deception, or mere vague repetition of cant and not quite honest terms, to give to ourselves for speaking of that love of God which is preached to us, and which, I am thankful to say, we really may find a warm and distinct feeling in our hearts. Surely, as I think, we deceive ourselves if we imagine that reason reveals to us a God of Love as it considers this warring world ; and still less is it able to give us account of that human love with which we make our response. There is more in it than this. Love or affection is not conceivable towards a Being or a Principle, or whatever we like to call it, which we have not seen or heard or realised by any of the ordinary means known to man, except on the supposition that He makes His influence felt by some means other than these ordinarily recognised ones, so that we do become aware of His presence, of His nearness, of His actual coming into our innermost being.

" There is no use, as I think, in our blinking the fact that the historical evidence and the witness of the world about us are not sufficient to excite in us any feeling approaching love to the Creator of it all. We had as soon He had left it alone. We have conviction that He might have made it much better than it is. Either so, or else He is not able to make it better—which is yet more unthinkable, seeing how much He has been able to do. We have

to believe that it has seemed good to Him, in a wisdom which we cannot pretend to fathom, to leave us in the present state of little happiness for some hidden end. We think that we can see reason for it in the design of training us by moral effort and by suffering to become something better than we could conceivably become without that experience. That is as much as we are able to say by way of justifying and explaining His dealings with His creatures. But this, our best hope and highest faith, is scarcely sufficient to excite in us a sense of gratitude. We need something more immediate, more near, more warm.

“ And this something we have, in full measure, if, and if only, we are able to be aware that God is in some way making His influence, His own being, penetrate into ours. Believe me, without this feeling, this awareness, all talk of our love of God is arid, it is meaningless. If we have this awareness we cannot fail to feel love for, to feel drawn towards, to recognise that we are comforted and stimulated by, the Source of this influence poured into us. We are certain then that all is well with us, because God is with us, and has not left us, once He has created us, to run our course unaided. We are then able in a true sense to say that we love Him—then, and only then.

“ Surely it is the whole root of the matter, this awareness of God's incoming into our souls! Surely it is this that should be preached from all pulpits and taught in all schools and in every home. Surely it is the true gospel! And surely it is the very gospel which Christ brought and taught, and was

never tired of teaching in many a passage and in many a proverb and in the example of His whole life on earth. 'The Kingdom of Heaven is within you.' It is there if you will but realise it and open your soul to its reception. The reception is not difficult. You have but to expect it, to ask for it. God is very willing, He is ever seeking, to impart Himself to His creatures. This is the message that all spiritual pastors and masters ought to carry to their people, and this is, or should be, the first purpose of prayer. 'Thy kingdom come.' That is the first and great petition. 'Prayer,' it has been said, 'is a mood.' It is the mood of expecting, of asking for, this incoming of the Spirit of God. After that, in second place, is the prayer for specific things needful for us: 'Our daily bread' and 'Deliver us from evil.' But the first thing we should ask is for the coming within us of 'the Kingdom of Heaven.' That is the first and great need and petition, with its implicit corollary: 'Thy will be done on earth as it is in heaven.' "

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